The Higher Ground Foundation
- stand up to climate change

Vulnerability Reduction Credits (VRCs) Standard Framework

V1.1 (March 2018)

Contents

0.1 Terminology

Notes:

When the Framework does not define a term or acronym, the IPCC's Fifth Assessment Report, 2nd Working Group glossary may be referenced at:

http://www.ipcc.ch/pdf/assessment-report/ar5/wg2/WGIIAR5-AnnexII_FINAL.pdf

If in the future the Framework is translated into other languages, the legal version shall remain with the original English language version.

0.1.1 Abbreviations

AIC: Avoided Impact Cost

AR5: IPCC'S Fifth Assessment Report (pub. 2013-2014)

CMIP: Coupled Model Intercomparison Project

GCM: General Circulation Model, also, General Climate Model

GloSea4 Global Seasonal Forecast System version 4

GNI: Gross National Income

HGF: Higher Ground Foundation

IEF: Income Equalisation Factor

IPCC: Intergovernmental Panel on Climate Change

ISO: International Organization for Standardization

MR: Monitoring Report

NGO: Nongovernmental Organisation

PD: Project Document

PRECIS: Providing REgional Climates for Impacts Studies

REDD: Reducing Emissions from Deforestation and Forest Degradation

RCP: Representative Climate Pathway

RCM: Regional Climate Model

tCO2e: tonne Carbon Dioxide equivalent

UNFCCC: United Nations Framework Convention on Climate Change

VRC™: Vulnerability Reduction Credit, or Vulnerability Reduction Certificate

0.1.2 Definitions

Accreditation - Formal recognition by the Higher Ground Foundation of a Validator's or Verifier's institutional capacity and competence to carry out the Validation and/or Verification functions in accordance with the VRC accreditation requirements.

Activity Period - A period of ten years from the Project commencement date or a subsequent renewed 10 year period upon which a Project may be issued VRCs. Following a period the Baseline Scenario must be revised and the project re-validated and re-registered in order to receive VRCs.

Adaptation - The process of adjustment to actual or expected climate and its effects through moderated or avoided harm or exploitation of beneficial opportunities.

Adaptation Measures - Actions taken to help reduce vulnerability to climate risks or exploit opportunities for reducing such vulnerabilities.

Additionality - The occurrence of Additionality is determined by assessing whether a proposed activity is distinct from its baseline. See definition of "baseline."

Avoided Impacts Cost (AIC) - The net change owing to Project activities of the climate change-induced loss in terms of asset or income to a system. This can be formulated as AIC = Expected Loss given climate change – Expected loss from that climate change given project implementation. A well-designed VRC project will have an AIC greater than zero. See Impact Cost.

Audit - A systematic, independent and documented process for obtaining audit evidence [records, statements of fact or other information which are relevant and verifiable] and evaluating it objectively to determine the extent to which the audit criteria [set of policies, procedures or requirements] are fulfilled. For VRCs, applies to Validation of the project document and Verification of project monitoring reports, and a review of accredited validators and verifiers.

Auditor - An independent third party assessor appointed to examine project documents and monitoring reports against the VRC Standard Framework requirements (See "Validator" and "Verifier")

Baseline Scenario – for the VRC Standard, it is a prediction of the [activities, events and impact costs] [inputs and outputs] in the absence of measures intended to facilitate Adaptation to climate change, holding all other factors constant (ceteris paribus).

Catastrophe/Catastrophic Harm - An event concentrated in time and space, in which a community undergoes severe danger and incurs such losses to its members and physical appurtenances that the social structure is disrupted and the fulfilment of all or some of the essential functions of the society is prevented (UNDRO 1984). Catastrophic harm is the impact of a catastrophe.

Climate Vectors - Climatological parameters or variables, e.g., temperature, specific humidity, wind speed. These are produced numerically by general/global and downscaled climate models and have effects upon the stocks and income streams of communities.

Community - As distinct from the "system," the people within the Project Boundary potentially impacted as identified in general terms by the methodology and specifically in the Project Document. This includes all genders, races, ages, religions or identities and groups of people, including indigenous people, pastoralists and other people who live within or adjacent to the project boundary, as well as other groups that may regularly inhabit the project boundary and derive income or livelihood from the area. See definition of "Project Boundary" and "System." For Indigenous Communities Consultation, please see Section 7.1.

Discount Rate – A theoretical or explicit rate of interest with which communities, individuals, or commercial bodies discount future costs and income. A discount rate is applied for estimates of Avoided Impact Costs.

Free and Informed Consent - Consent obtained under no coercion or quid pro quo manipulation ("free") within a time frame sufficiently far enough in advance ("prior") of planned activities. For Indigenous Communities Consultation, please see Section 7.1.

Future Impacts of Climate Change (Likely) - A potential future climate impact is said to be likely when it has a one-sigma (68%) probability of occurring. For a discussion on the methodology used to determine likelihood of occurrence, please refer to Section 4.7 of this document, "Confidence in Avoided Impact Calculation Validity," and Section 8: "Annex: Impact Cost Estimation Outcomes Confidence."

General Circulation Model (also, Global Climate Model, GCM) – A model depicting the climate using a three dimensional grid over the globe, typically having a horizontal resolution of between 250 and 600 km. GCMs used to better understand the long-term, macro-level effects of anthropogenic greenhouse gas emissions generally incorporate economic and social models coupled to physical models that in turn consist of coupled radiative forcing and atmospheric/ocean heat exchange sub-models with various feedbacks.

Gross National Income - Calculated income by the World Bank, thresholds also are set each year that divide countries into income groups. The IEF uses the lower to upper middle-income threshold as the benchmark for calculation of IEF.

Higher Ground Foundation - Non-profit organization created with the goal of encouraging action by companies and governments in wealthy nations interested in helping the vulnerable impacted by today's and tomorrow's climate change. This will be accomplished by creating a market mechanism and organizing a large-scale market in climate vulnerability reduction credits (VRCs™) to measure the outputs of climate adaptation projects.

Impact Cost – For VRC calculations, the anticipated climate change-induced loss to a System in terms of assets or income.

Impact Cost Factor - A factor that may be quantified in economic terms (asset or income stream) used to calculate the economic Impact Costs and the Avoided Impact Costs of a Project intervention.

Income Equalisation Factor (IEF) - A proxy measure for adaptive capacity based on per capita community income within the community. IEFs are a key variable in quantifying the VRCs awarded.

Indigenous Peoples - The definition of Indigenous Peoples and their representation follows (Article 3, UN DRIP 2007) and or (Article 169, ILO 1989), depending on the host country where the proposed climate change adaptation Project is to take place. Both definitional texts support Indigenous Peoples' self–identification as an international human right, and that has become international customary law. See Section 7: Standards for Indigenous Communities Consultation.

Input - In relation to VRCs, inputs are the measures or materials deployed with the intention to reduce vulnerability to climate change. Some climate Adaptation Project evaluations focus on inputs as opposed to Outputs or Outcomes. See "Outputs" and "Outcomes."

The Intergovernmental Panel on Climate Change (IPCC) - The scientific intergovernmental body established by the United Nations Environment Programme (UNEP) and the World Meteorological Organization (WMO) to provide the world with a clear scientific view on the current state of knowledge in climate change and its potential environmental and socio-economic impacts. Project and methodology developers shall use the IPCC's latest relevant documents for definitions, interpretations, and relationships not articulated by the Framework or other Higher Ground official documents.

Leakage - Changes in Vulnerability taking place outside the Project Boundary.

Local Stakeholder Consultation - A requirement for the Project Proponent to gain Community acceptance, meaning that members of the Community, including the whole array of economic class, gender, age, ethnic, and religious groups among other constituents are made aware of the Project and are given a real opportunity to let the Project Proponent know if they have objections or other feedback to the design and execution of the Project. For Indigenous Communities Consultation, please see Section 7.1.

Materiality - Information is Material if its omission or misstatement could influence the economic decision of users. Materiality depends on the size of the item or error judged in the particular circumstances of its omission or misstatement. Thus, Materiality provides a threshold or cut-off point rather than being a primary qualitative characteristic which information must have if it is to be useful.

Monitoring - Project Proponents are responsible for Monitoring (for instance, Monitoring the length of time over which a flood defence has been operational). Monitoring requirements are set out in the Project Document as directed by the HGF VRC Project Document Template (see "VRC Project Document Template").

Outcomes - In terms of relationship to VRCs, Outcomes are the reduced Vulnerability to climate change, in terms of avoided economic loss, that a system may realise owing to decreased losses to economic assets and/or economic income. See "Inputs" and "Outputs.

Output - In terms of relationship to VRCs, Outputs are the enhanced level of services and infrastructure, based on Inputs intended to reduce Vulnerability to climate change. See "Inputs" and "Outcomes."

Performance Benchmarks (for additionality) - Methodologies may formulate quantitative levels for Outputs that are the threshold for permitting a Project to be considered Additional.

Permanence - The requirement that, following Validation, Project activities and / or investments must continue to generate VRCs throughout the crediting lifetime of the Project.

Positive Lists (for additionality) - Methodologies may identify specific climate Vulnerability Reduction Project types/measures that will be considered Additional without any further justification.

Present Impacts of Climate - For the sake of VRC calculation, present impacts can be considered to be the average climate conditions between 1951 and 1980. If sufficient data covering this precise period are not available, the present impacts can be considered to comprise the averaged conditions over not less than fifteen contiguous years prior to 2000.

Project Boundary - The limits of the climate vulnerable activities and/or assets that are under the control of the Project Proponent that are reasonably attributable to the VRC Project activity. See "System" definition.

Project Crediting Lifetime - One or more Activity Periods for which a Project may receive credits.

Project Document (PD) - The formal submission for Project registration that describes the VRC Project in detail clearly setting out Project Baselines, intervention effects and Monitoring guidelines that follows viable, transparent, and robust methodologies.

Project Monitoring Report (PMR) - collection of analysis of information to identify and measure any changes; frequency of observations and questions to be addressed during the negotiations process prior to Project commencement

Project Proponent – An individual or organization that proposes a Project. Proponents could be a single person, NGO or foundation, corporation, or a local, state, or national government body, including communities or members thereof in which the proposed Project will be implemented.

Regional Climate Model (RCM) – Technically, a climate model developed at sub-GCM grid scale through nested (dynamic) climate modeling or statistical interpolation. For the purposes of this framework, any model, interpolation, or dataset that provides regional or local climate outlooks consistent with the reliability and robustness requirements detailed in Annex 6: Impact Cost Estimation Confidence is applicable [see also "General Circulation Model"].

Registration - The formal acceptance of a validated Project following the satisfactory achievement of all VRC Standard Framework requirements as further articulated in an approved methodology.

Regulatory Surplus - An additionality requirement: if the Project is required by law or regulation, then the Project is not additional unless it can be established that such law or regulation is not enforced.

System – The climate-vulnerability physical and/or socio-economic assets that a VRC project shall address. The system is within the Project Boundary.

Validation - The systematic, independent and documented process of the evaluation of a Project Document against the applicable requirements of the VRC Standard Framework and any relevant sector standard approved by the HGF from time to time.

Validator - A body accredited by HGF to review and determine that Project Documents fulfil VRC Standard Framework requirements. Also called an Auditor.

Verification - The systematic, independent and documented process of the evaluation of the Project Document against specific criteria. The verification process is assessed against the applicable requirements of the VRC Standard Framework as further articulated in an approved methodology, and any relevant sector standards approved by the HGF from time to time.

Verifier - A body accredited by HGF to review and determine that Project Monitoring Reports fulfill VRC Standard Framework requirements as outlined in the Project Document. Also called an Auditor.

VRC Methodology Committee - The body designated by the Higher Ground Foundation to review and approve or reject proposed VRC Methodologies.

VRC Methodology Template - The form used by Project Proponents to prepare VRC methodologies for approval by the Higher Ground Foundation.

VRC Model – A linked climate, impacts, and financial model that simulates how VRCs are generated by a Project.

VRC Project (or Project) - Activities aiming to reduce Vulnerability to the effects of climate change through a sustained delivery of adaptation measures that generate "Vulnerability Reduction Credits."

VRC Project Document Template - The form used by project proponents to prepare VRC project documents for validation by auditors and registration by the Higher Ground Foundation.

VRC Registry – A system, to be developed, to track Projects that are registered by Higher Ground Foundation and credits issued (and possibly, credits retired). This system may be managed in house, or outsourced, to be decided.

VRC Standard Framework – The high-level set of requirements guiding the development and implementation of VRC generating methodologies and Projects for VRC approval, Registration, and VRC issuances.

VRC Validation and Verification Manual – The standard document, to be developed, prescribing validation and verification principles and requirements.

VRC Validation Report Template – A template, to be developed by the Higher Ground Foundation, which provides a listing of validation requirements and needed data; for use by HGF project validators.

VRC Verification Report Template - A template, to be developed by the Higher Ground Foundation, which provides listing of Verification requirements and needed data; for use by HGF Project Verifiers.

Vulnerability - The propensity and lack of capacity to cope and adapt, or susceptibility to be adversely affected by, the impacts of climate change.

Vulnerability Redistribution – See Leakage.

Vulnerability Reduction - Minimising the impact climate change has on communities and other systems: VRC projects reduce (avoid) economic costs of climate change within a system boundary.

Vulnerability Reduction Credit (VRC) - A measure of the monetised cost of the estimated impact of climate change, as adjusted for the income level of the Community, to be avoided as a result of the Project. VRC is an unregistered trademark owned by Climate Mitigation Works Ltd., a limited company in England and Wales. See also Vulnerability Reduction Certificate.

Vulnerability Reduction Certificate (also VRC; also VRCert) - The formal certificate issued for Projects representing the monetised cost of the estimated impact of climate change, as adjusted for the income level of the Community, to be avoided as a result of the Project. VRC is an unregistered trademark owned by Climate Mitigation Works Ltd., a limited company in England and Wales. See also Vulnerability Reduction Credit.

1 Introduction to the VRC Standard Framework

The Vulnerability Reduction Credits (VRCs™) Standard Framework ("the Framework") provides a global, unified standard for quantifying the outputs of projects that reduce vulnerability to the effects of climate change, through a sustained delivery of adaptation measures. Projects must meet rigorous voluntary validation, registration, monitoring and verification standards and, in doing so, achieve certification as VRCs. An issued VRC is denominated as a Vulnerability Reduction Certificate.

The Framework provides the requirements for developing projects and methodologies, including clear baseline regimes, as well as the requirements for validation and monitoring, of projects and verification of the project outputs. The Framework is supported by other documents that give requirements specific to interventions in areas such as human health, infrastructure, water supply, and agriculture. The Framework will also be supported by documents outlining integration of VRCs with other ecosystem metrics, standards, and programs. Italicised terminology and abbreviations used in the Framework are defined in the VRC Glossary or in the Intergovernmental Panel on Climate Change (IPCC) latest report definitions.

The Higher Ground Foundation supports the United Nations' 2030 Agenda for Sustainable Development and its Sustainable Development Goals (SDGs), and the United Nations Framework Convention on Climate Change and its Paris Agreement, and offers the VRC Standard Framework as a mechanism for aiding parties in meeting the aims of these goals and agreements.

A VRC is the monetised cost of the estimated impact of climate change, adjusted for the income level of the community, which will be avoided as a result of the project. In brief, it is a credit for work done to avoid damages or losses owing to climate change.

VRCs are output based and issued periodically, post hoc, after validation of vulnerability reduction measures that have been and are being implemented. VRCs are issued based on the percentage of effectiveness of actual activity or level of service of the adaptation activities as defined in the VRC methodology and delineated in the Project Document.

Each VRC is denominated in units of €50, as shown below:

The number of VRCs issued to a particular project is a function of the VRC's nominal value, the project's Avoided Impact Cost (AIC) and an Income Equalisation Factor (IEF), where:

$$\text{Number of VRCs} = \frac{(\text{AIC} \times \text{IEF})}{€50}$$

The relationship between VRCs, AICs and IEFs is derived from the three basic components of vulnerability as articulated in the literature: exposure, sensitivity, and adaptive capacity.

This document shall be updated from time-to-time and readers should ensure that they are using the most current version of the document. Where external documents are referenced, such as the World Bank's benchmarks for Gross National Income (GNI) country categories, are updated, the most recent publicly available version of these documents should always be used.

Further information on VRCs is available at www.thehighergroundfoundation.org.

1.1 Acknowledgements

The VRC Standard Framework (draft) was prepared by a team of volunteers associated with The Higher Ground Foundation initiative. The team included: Linus Adler, Neil Butler, Sarah Docherty, Marie Schoen, Karl Schultz, Jonathan Young and Zubair Zakir. Additionally, the team benefited from reviews and support from a number of other Higher Ground volunteers.

Following completion of the internal draft, The Higher Ground Foundation invited a panel of external experts to review and enhance the draft Standard Framework, and subsequent ancillary guidance documentation. The experts review planning process was undertaken by Higher Ground volunteers Karl Schultz and Linus Adler, with external guidance from Mukesh Gupta from Central European University (CEU).

The external review was a voluntary effort undertaken remotely using the Collaborase standards development platform, but with at key points direct engagement between Higher Ground and the Experts Group. Linus Adler, Lydia Gomez Gonzalez, Mukesh Gupta and Karl Schultz served as the Group Secretariat. Blake Gentry drafted and coordinated review of Annex 7: Indigenous Communities Consultation.

Higher Ground Foundation is grateful for the generous volunteering of time and expertise in the external expert review by a number of professionals from a wide variety of relevant groups and geographies, and expertise across a wide range of disciplines these fields. Specifically, we thank the following experts:

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1.2 The Higher Ground Foundation and the VRC Standard Framework

The Higher Ground Foundation is releasing the VRC Standard Framework to guide project proponents and other stakeholders in preparing and securing approvals for their projects and VRC issuances. The Higher Ground Foundation is the body that registers projects, issues VRC certificates, and accredits project and methodology validators and monitoring report verifiers. Initially this work is organised under the private limited company Climate Mitigation Works, with an anticipated transition to a private not-for-profit group.

2 Scope of VRC Standard Framework

The Scope of the Framework includes the framework principles, methodology, project and validation/verification guidelines set out in Sections 3, 4, and 5, respectively, of this document. It is made available to be applied for climate change adaptation projects that may generate VRCs (VRC Projects).

1. The methodology guidelines outline the principles and required elements of a project-type VRC methodology.

2. The project guidelines outline the template and required components of project documents; the methodology for each project-type shall provide specific requirements to satisfy each component.

3. The validation and verification guidelines cover the requirements for project review and validation by a third party auditor, project monitoring, and verification of the monitoring reports, and also are guided by the project-type VRC methodology.

2.1 The VRC Project Process

Methodology: A methodology approved by HGF is used to guide design of the Project Document and update (using currently approved methodology) to the Project Document for revalidation.

Design: A Project Document (PD), based on an approved (or, if new, proposed) VRC Methodology describing the VRC project in detail needs to be formulated before contract negotiations and registration with HGF. To be credible, it will need to set out clearly project baselines, intervention effects and monitoring guidelines that follow viable, transparent, and robust methodologies.

Local Stakeholder (Community) Consultation: The PD is presented to the local community for consultation.

Validation: PD is submitted to an accredited validator, who reviews it and potentially declares that it meets the requirements as set out in the VRC Standard Framework, the appropriate methodology, and according to the project document template.

Registration: The validation report and PD are submitted to HGF for Registration, upon which time a registration fee shall be paid by the project proponent.

Implementation: VRC projects will not receive any explicit implementation instructions from HGF), but it will be observed and lessons will be learned, analysed and reported by Higher Ground's research team.

VRC Verification: Whenever the project proponent wishes to be issued VRC certificates, it must provide a verified Project Monitoring Report (PMR) to HGF. That is to say the PMR must be tested for accuracy by an independent, accredited, expert organisation hired by the project proponents to review the monitoring reports, and determine if the project reduces

vulnerability in accordance with the PD, or if not completely, the percentage effectiveness of activities during the period for which the project is requesting VRC certificate issuance. A project proponent may have its monitoring reports verified for any length of time anytime during an activity period.

VRC Issuance: once the verifier has confirmed the number of VRCs that may be issued, Higher Ground will issue the credits as "VRC Certificates" and note the issuance of the in a registry, at which time an issuance fee shall be paid by the project proponent.

10-year Revalidation: For each 10 year project period, the project must revisit the baseline in conformity to the currently approved methodology.

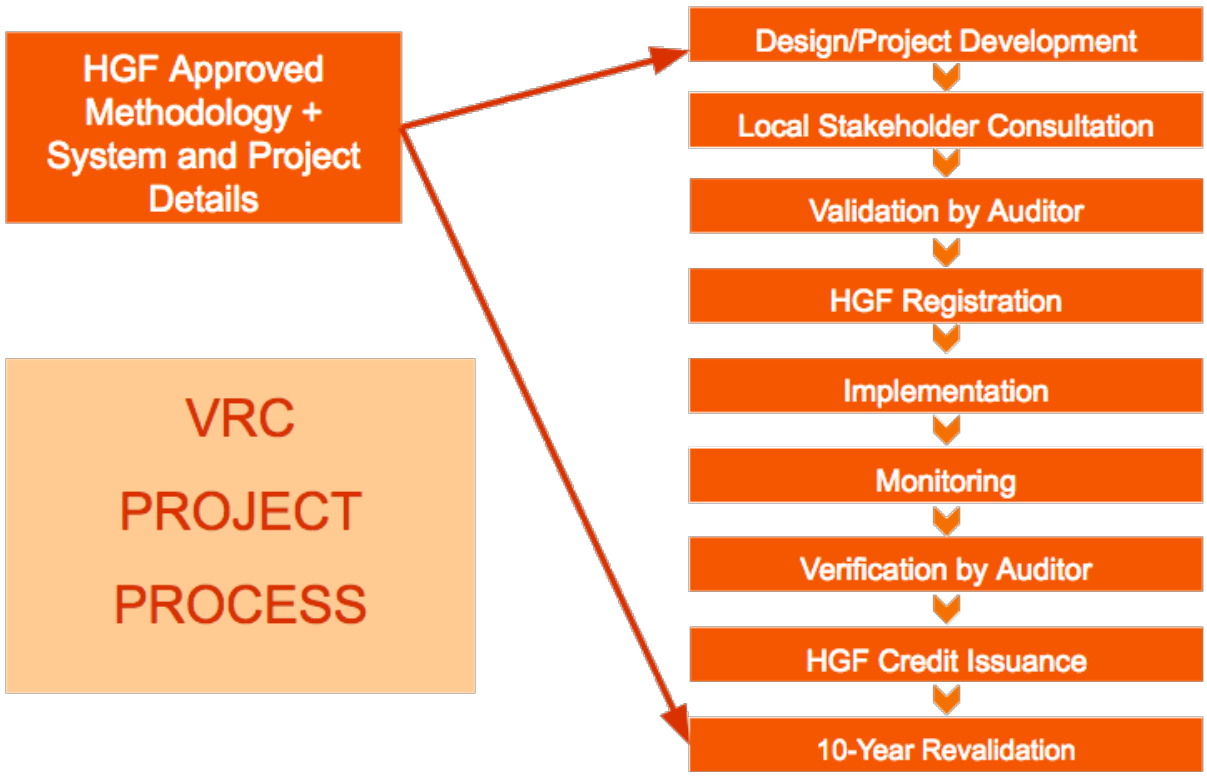

Figure 1. Process for Developing and Implementing VRC Generating Projects

2.2 Applicable Sectors

VRC generating projects may include any intervention where the impact costs of climate change may be reduced. These include projects in the following sectors. Project methodologies shall identify the sector and furthermore specify the type of intervention as further articulated in Section 4.2.

Natural and Managed Resources and Systems, and Their Uses

1. Freshwater resources
2. Terrestrial and inland water systems
3. Coastal systems and low-lying areas
4. Ocean systems
5. Food security and food production systems

Human Settlements, Industry, and Infrastructure

1. Urban Areas
2. Rural Areas
3. Key economic sectors and services

Human Health, Well-Being, and Security

1. Human health: impacts, adaptation, and co-benefits
2. Human security
3. Livelihoods and poverty

3 Principles

0 Reduction of Vulnerability to Climate Change: Vulnerability Reduction Credit (VRC) generating projects seek to maximise the reduction of vulnerability to climate change. The vulnerability reduction is subject to the constraints of the below principles, applied holistically, that serve as the fundamental basis for justifications of methodological and project design decisions. Information and estimates, guided in part from ISO 14064-2:2006, clause 3 (ISO 2009):

1 Avoidance of Harm: VRC Projects must with high confidence establish that they will not impose net loss or damage to any social, economic, or ecological systems. Furthermore, Projects must with very high confidence establish that they will not impose any greater risk of catastrophic harm.

2 Consultation: the community impacted by a project – including all participants- shall play an integral role in determining the acceptability of a VRC generating project.

3 Sustainability: HGF registered projects shall meet the needs of the present without compromising the ability of future generations to meet their own needs. This is articulated by the 2005 World Summit on Social Development as comprising three pillars: economic development, social development and environmental protection (UN 2005).

4 Completeness: information and analyses must, to the extent possible, be complete assessments of baseline and project loss and damage. In the absence of direct data, expert judgment, appropriate use of models and conversion factors and estimations of uncertainty may be applied.

It is understood that Completeness may need to be traded off with other principles, especially where information and analytical tools are limited in their availability or accuracy. For instance, if some loss and damage is identified, but it is not possible to accurately quantify them, then they may be omitted on the basis of Conservativeness.

5 Consistency: consistency of data and analyses employed may be satisfied by uniform use of procedures, measures, and units to describe the difference between baseline and project impact costs, among other descriptions and estimations.

6 Accuracy: As far as is relevant and practical, data and analyses must be as accurate as possible. If accuracy is not possible or practical, than the Conservativeness principle shall apply.

7 Transparency: information and analytical approaches must be open, clear, factual, unbiased and coherent based on documentation. Information, analyses and processes that are available for review (i.e. there must be an audit trail). This includes documenting assumptions, references to background material, calculations and methodologies, documentation of how principles have been applied, justification for methodologies and criteria, so that they may be reproduced by another party. Where information or models are not openly available or proprietary, then the principles of Relevance and/or Conservativeness must be applied.

8 Conservativeness: Project documentation must identify and characterise the level of uncertainties in parameters and data used to develop baselines and project impacts; it must also explain how choices are conservative and appropriate to the uncertainties in the data or assumptions.

Considering these principles holistically:

- Where Completeness or Accuracy is poor, then Conservativeness must be applied more rigorously.
- Consistency is essential except where more accurate data and analytical approaches emerge, in which case new approaches may be used but transparently documented and justified.
- Transparency must be applied. If some data or analytical tools are not transparent, then their use must be justified and Conservativeness must be applied.

4 VRC Methodologies and Methodology Review and Approval

All registered projects shall be validated and registered based on their conformity to the VRC Standard Framework and must follow the VRC Methodology Template (Annex 14). The HGF may prepare methodologies, or they may be prepared by a project proponent or by a third party. All proposed methodologies shall undergo an independent review and approval process as outlined in Section 4.12 Methodology Review and Approval and detailed in Annex 9: Methodology Approval Guidelines.

A list of approved methodologies is available on the HGF website. All new methodologies applying for approval shall use the VRC Methodology Template and be approved via the Methodology Approval Process. New methodologies shall not be developed where an existing methodology could be reviewed and expanded to consider additional project activities or scopes.

Methodologies shall be informed by a comparative assessment of the scenario with the project and its impact costs against plausible alternative scenarios if the project were to not happen in order to identify the baseline scenario.

Where methodologies mandate the use of specific models or model outputs they shall be described explicitly within the project document and/or made publicly available.

4.1 VRC Methodology Templates

The project proponent shall use the Higher Ground VRC Methodology Template (Annex 14), to be made available on the Higher Ground Foundation website. The methodology shall include project proponent contact information, followed by the following template sections:

1. Summary Description of the Methodology,
2. Definitions,
3. Sectoral Scope and Applicability Conditions,
4. Project Boundary and Applicable Impact Cost Factors,
5. Baseline Scenario,
6. Additionality,
7. Quantification of VRCs,
8. Avoidance of Harm, including risk factors,
9. Compliant/Responds to relevant laws,
10. Local Stakeholder Consultation,
11. Monitoring Plan, and,
12. References.

4.2 Sectoral Scope and Scale

As outlined in Section 2.2, Applicable Sectors, VRC Methodologies shall identify the sector within which the project intervention is applicable. Furthermore, the methodology shall highlight the specific applicability and intervention under which the methodology addresses, otherwise called an "applicable project type."

Methodologies shall endeavour to apply to as wide a set of projects as is viable. Deviations from the methodology are possible if the project proponent provides justification that is approved by the HGF (see 5.1.8 Deviation from Methodology).

Revisions to methodologies that apply to a broader array of project types are possible and encouraged; the project proponent must provide justification for the modification for HGF approval (see 4.13 Methodology Revision Process and Approval).

Methodologies may be developed for small scale projects which are simpler and require fewer data than apply to other projects. Guidelines for the definition and development of small scale methodologies shall be made available at a later date. Project proponents are welcome to contact The Higher Ground Foundation to discuss their small scale projects and how a methodology may be developed for Higher Ground review and approval.

HGF shall create and post on its website a list of methodologies (Annex 16 Approved Methodologies).

4.3 Project System Boundary and Leakage

Project system boundaries must be defined and the methodology must outline the permissible approach to define the system and its boundary.

The methodology shall outline how project boundaries are defined (using diagrams, as required) and the impact cost factors that shall be identified and assessed. Boundaries may be both physical and social. For physical boundaries, methods to define may include using Geographic Information Systems (GIS), ground survey or any mapping method that uses diagrams or maps as outputs. For social boundaries, if these do not correlate completely to the physical boundary, then it is important to define the community impacted, including dispersed populations that may not be within the physical boundary (e.g., family members who have migrated away from a vulnerable community in order to maintain livelihoods both within and outside the physical boundary).

The methodology shall outline permissible impact cost factors and if some cost factors may be optionally used, and the required justification for selecting optional factors, and outline the required approach to analyse how the project may result in changes (positive or negative) in climate vulnerability outside of the project boundary, namely, the potential for project leakage, or “vulnerability redistribution.”

If there is negative Leakage (increasing climate change vulnerability) to a material scale (see definition of Leakage), then projects shall be required to calculate, using and justifying

conservative assumptions the impact costs and these shall be deducted from the system's avoided impacts cost in calculating VRCs. Methodologies shall identify the types of leakage that a project document must address, and the approach to calculating the avoided impacts cost shall follow the approach as delineated in 4.8, Estimating Avoided Impact Costs.

For the purposes of leakage analysis, "conservative assumptions" refer to a low threshold level of probability needed to identify potential negative leakage based on analysis of the past, similar to our catastrophic harm avoidance criterion, regarding with any potential harm. Specific situation types shall apply this differently and shall be outlined in the methodology."

Projects that result in leakage may come up with approaches to monetarily or otherwise compensate the affected communities or other parties. The methodology shall outline the circumstances under which compensation may be applied, using the Framework Principles, and also outline what documentation is required to demonstrate that compensation is accepted by all affected parties as fair and appropriate.

4.3.1 Quantifying Project Related Greenhouse Gas Emissions and Offsetting Requirements

Project proponents shall be mindful of changes in greenhouse gas emissions resulting from measures undertaken to realise VRCs. However, a "positive list" of project types shall be developed by the Higher Ground Foundation and posted as an Annex to the Framework; these project types do not require calculation of emissions. These will be posted in Annex 8.1: List of project types not requiring emission calculation and 8.2: Approved sources of emission offset credits.

If a project type is not on this positive list, net changes in greenhouse gas emissions shall be calculated, using relevant and publicly available methodologies (for example, the methodologies employed by the Clean Development Mechanism of the UNFCCC, the IPCC), simplified using the VRC Standard principal of conservativeness. The project shall identify emissions changes both within and outside the project boundary.

In instances where net greenhouse gas emissions (measured in t CO2e using the latest IPCC global warming potentials) are expected to exceed 25% of the number of VRCs generated, assuming an IEF of 1, the project must offset emissions to reach the 50% level through the purchase of emissions reduction credits. Sources of approved credits are listed in Section 8 Annex.

Where required, offsets must be retired within one month of issuance of emission reduction credits. If the project does not use a positive list, at the end of each ten year period, emissions baselines and estimates from the project shall be recalculated.

Further guidance is available in Annex 8: Standards for Calculating VRC Project GHG Emissions.

4.4 Baseline Scenarios

The baseline scenario for impact costs is a function of the expected impact of climate change on the vulnerable system that a VRC generating project intends to treat. The baseline scenario for the income equalisation factor is a function of community level income estimated for the beginning of each project period.

The impact cost baseline considers future climate, economic costs and benefits, and project design assumptions for the base case, and will follow the requirements set out in the project methodology.

The chosen baseline scenario must be justified based on methodology requirements, and equivalence and differences between the baseline and project scenarios shall be explained. Following the instructions set out in Section 4.8 (Estimating Avoided Impact Costs), assumptions, values and procedures shall ensure that expected impact costs from climate change are not materially overestimated.
Project methodologies will outline the approach to identify the most plausible baseline scenario, taking into account:

1. Existing and anticipated levels of impact cost owing to climate induced vectors, anthropogenic or otherwise, with no project and/or a most probable alternative project that could be construed as happening in the baseline (including consideration of regulatory surplus).
2. Anticipated per capita gross community incomes within the project boundary as of project start.
3. Uncertainties, data availability, and other limitations in what counts as impact costs.

Higher Ground shall prepare and update guidelines on levels to calculate the income equalisation factor and approved approaches to estimate baseline community level (within project boundary) per capita incomes.
The existing VRC Framework does not include provision for standardised baseline methodologies. As such, only project level methodologies are currently permitted. Higher Ground may formulate a framework for standardised methodologies in the future.

To be conservative, baselines will assume to include avoided impact costs that projects planned without taking into account climate change, would avoid, unless a clear case can be made that no such project would be undertaken without VRCs.

The project level methodology shall include approaches to evaluate whether the baseline includes avoided impact costs that are unrelated to future climate change. In such cases, the baseline impact costs, as represented in Figure 2, shall be the sum of Areas B and C.

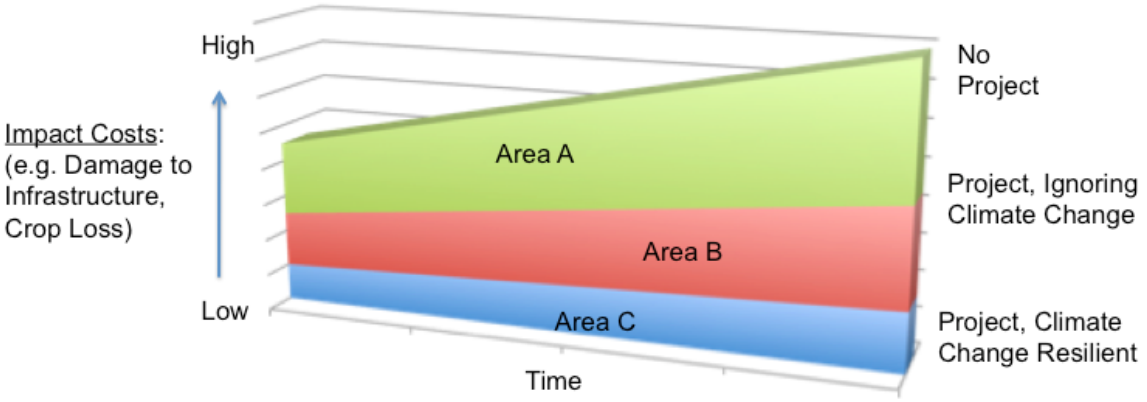

Figure 2. Alternative baselines for calculating impact costs and avoided impact costs (AICs)

Project baselines may also incorporate impact costs from historical climate change, counting from the start of a project. Baseline set of conditions may be represented by either the average climate conditions between 1951 and 1980 or, If sufficient data covering this precise period are not available, the averaged conditions over not less than fifteen contiguous years prior to 2000.

4.5 Revising Baselines for New Project Periods

Baselines shall be revised according to the latest version of the methodology to account for changes in the subject system, climate modelling and scenario knowledge and to integrate changes in adaptive capacity as reflected in Income IEFs.

For each ten-year project period, the baseline climate impacts shall be revisited and the methodology shall outline how this is undertaken for revalidation, including where pertinent on impact cost estimation assessment of multiple impacts as further discussed in Section 4.8, Estimating Avoided Impact Costs. A review of the climate forecasts against the previous period's historical climate data and a review of new climate models shall be undertaken, in conformity to Section 4.7, Confidence in Avoided Impact Calculation Validity.

To formulate the IEF, the community per capita income shall be resurveyed according to approaches outlined in Section 4.9, Income Equalisation Factor. The current threshold between lower and upper middle income shall be employed to calculate the IEF.

The baseline revalidation shall follow the same process as project document validation, including the process for stakeholder consultation and use of an accredited validator. Once validated, the project resubmits the revised baseline/project document to The HGF for re-registration.

4.6 Project Design

In developing a VRC project, current and future climate change-influenced factors are applied in order to define and compare: a) climate change-driven economic impact cost scenarios with; b) the outcomes of intervention to determine avoided economic impact costs owing to a project intervention. Schematically, this process can be represented as follows:

1) Define threatened system (project boundary).
2) Determine threatened sources of economic income or assets (impact cost factors) within proposed system. Defining the threatened system may require identifying elements of the system and stating impact cost factors showing vulnerability of the system elements.
3) Define any leakage (see Section 5.1.7: Leakage, Redressing Measures and Compensation).
4) Based on 3., redefine project boundaries if necessary.
5) Identify project options:
    a) a) consider all reasonable project options available
    b) (b) as part of Local Stakeholder Consultation (see 4.11), describe vulnerability analysis and secure feedback from community on: if community members agree vulnerabilities are correct, if they agree with the project proposed, and if they have suggestions regarding the project design.
6) Determine baseline and project scenarios:
    a) Develop analytic model describing impact cost factor (for example, monetised value of production or assets)
    b) Determine how impact cost factors are driven by climate:
    c) For each impact cost factor, identify its driving climate variables. Ideally, this can be done analytically (for example, through equations or algorithms linking impact cost factors with series of respective sets of driving variables. For more information on the analytic linking of climate variables to specific impacts, see Annex).
    d) For each driving climate variable, identify its likely magnitude and direction of change under the general (global) circulation Coupled Model Inter-comparison Project (CMIP) 5 model output consistent with what is (as of AR5) considered to be a moderately high UNFCCC's climate change scenario - global Representative Concentration Pathway (RCP) 4.5 (for example, 2.4 +- 0.8 degrees Celsius above historical 1850-1900 baseline). To be usable for project purposes, the likely direction and magnitude of change in each individual climate driver must be substantiated based on one or more of the following:
        i) widely accepted practice (for example, current textbook knowledge), or, preferably;
        ii) peer reviewed research (for example, published in technical journals), or;
        iii) Downscaled climate modelling (see Annex 17: Approved downscaled modelling tools).
7) Based on 6.d, determine or calculate effect of likely change in climate drivers on each impact cost factor. This effect is the project baseline.

8) Develop analytic model for the effect of project intervention on each impact cost factor. The difference between this and the project baseline from 6.c is the outcome of the potential project.

The issuance of VRC Certificates for a project is determined by the project's outcome in 7 above.

Once a project has been registered by Higher Ground, use of its model, if any, and outputs (noting any limitations) will be permitted by subsequent projects.

4.7 Confidence in Avoided Impact Calculation Validity

Projects need to demonstrate with sufficient confidence that the calculation of avoided impacts for measures undertaken accurately accounts for actual baselines and project effects. This is necessary for two reasons:

1. first, project calculation outcomes should, in themselves, adhere as closely to real effects as possible;
2. more importantly, measured project outcomes should be as consistent as possible among VRC projects in order to ensure and maintain the cohesiveness and credibility of the overall VRC generation and crediting process.

In light of the importance of self- and cross-project consistency, impacts outcomes confidence, and streamlining project development, modelling of project impact cost factors and climate drivers will preferably be based on accepted practice and knowledge. Although the project developer may elect to perform their own modelling of climate and other factors contributing to vulnerability, such efforts must be made with great care and expertise and likely involve high costs in terms of time and resources.

Outcomes confidence must consider both the climate modelling outputs and the methodologies used to input these into impact cost factors, including the economic costs and benefits of interventions. In general, the overall uncertainty of a multi-stage modelling process increases as the number of stages increases; for instance, a project based on the value of a certain crop to farmers might use the outputs of a GCM to feed into an RCM, with certain outputs of this feeding into a crop yield model, which in turn is integrated into a market model to determine farmer income. Each level of this process will introduce an inherent variance or uncertainty in its output that adds to the overall variance of the result and thus cumulatively reduces the outcomes confidence. For the purposes of this framework, constituent uncertainties will be classified either as climate model related or impact cost factor related (for example, inherent to the model(s) used to calculate impact cost given specific climate inputs). The management of uncertainty in these is addressed in the following sub-sections.

Where projects rely upon new modelling, they should demonstrate with sufficient confidence that these are reliable and robust and, where necessary, flexible based on the guidelines described in Annexes 6.1.1 - 6.1.3.

4.7.1 Avoidance of Catastrophic Harm

Methodologies must define potential faults or conditions under which failure of project infrastructure, operations or methodology would lead to sudden loss of life and demonstrate that measures have been taken to reasonably eliminate the possibility of such occurrences. Where catastrophic occurrences can be actuarially forecast, project developers must demonstrate that the cumulative probability of occurrence increasing owing to the project measures, is lower than one percent within 50 years of project start.

Actions to anticipate and mitigate catastrophic harm shall be taken in reference to the principles as set out on the Sendai Framework for Disaster Risk Reduction (UNISDR 2015).

Individuals or groups within project 'communities' are entitled to submit written documentation to The Higher Ground Foundation for mediation if they believe that the project proponents have not adequately addressed concerns regarding potential harm, catastrophic or otherwise, arising directly from or as an indirect result of project activities. Any such objections will be addressed by the project developer following the protocol for Local Stakeholder Consultation (see Section 4.11) and, following the protocol outlined in the preceding paragraph, must be added to the list of potential faults that can be reasonably dismissed or otherwise demonstrated to have a lower than one percent cumulative probability of occurrence within 50 years of project start.

Individuals or groups are entitled to submit a complaint to The HGF if they believe that a registered project and/or project proponent has caused them harm.

Following the receipt of a valid grievance, the HGF will conduct a desk review to determine the extent of the alleged breach and if, upon the sole discretion of the HGF, it is determined that an investigation is required, it will produce a written investigation plan. The investigation plan will include, but not be limited to, the scope of the investigation, a list of potential other stakeholders to be queried, and the timeline for resolution. A project developer has the right to appeal the outcome of an investigation by notifying the HGF that it would like to do so within 30 days of receiving the investigation findings.

Following a positive finding of fault, the HGF will, upon its sole discretion, determine an appropriate sanction including potential project deregistration or prevention of project proponents from future participation in VRC project activity.

In formulating a methodology, potential unintended consequences and long-term impacts on individuals, communities, and environments must therefore be explicitly addressed by the project proponent. The methodology shall outline potential consequences and provide an analytical framework to determine if the consequences shall be considered catastrophic.

Examples of potentially catastrophic consequences include:

- Significant threats to endangered species or unique ecosystems
- Irretrievable damage or destruction to historically or culturally significant property
- Significant threat to lifestyles or well-being of native communities
- Risk of destruction/loss of life of entire households and communities

Where catastrophic occurrences can be probabilistically forecast, project developers must demonstrate that the cumulative probability of occurrence within 50 years of project start is lower than one percent.

Methodologies must also outline the approach to determine the probability of net generation of VRCs. Based on spread of likely overall impact outcomes derived through climate and project intervention robustness and reliability analyses as described in the preceding sections, there must be an overall likelihood that a project produces a net positive intervention result (that is, that VRCs are generated by the project). Unless otherwise specified in the methodology, it is assumed that this can ascertained by assuming that the potential net outcomes of a project are distributed normally; thus, a project likely to produce a net positive intervention would have a distribution of potential outcomes for which a net outcome of zero is at least one standard deviation away from the mean (expected) value.

[HGF anticipates organizing an "Inter-project Pool to Hedge Against Project Reversals"; initial considerations of the design are available in Annex 13: Inter-Project Pool for Project Reversals.]

4.8 Estimating Avoided Impact Costs

Project methodologies shall outline the permissible approaches to calculate anticipated avoided impact costs (AICs). AICs are formulated as follows:

1. As noted in subsection 4.8.1, AICs are to be estimated for only the elements of a project that take climate change into account. If it can be clearly demonstrated that no intervention would take place at all without VRCs, then the impacts of all elements of the project are to be estimated.
2. The methodology shall outline all possible AIC parameters (called "impact cost factors" in the methodology and project templates) that are permitted. Impact cost factors may be financial or incorporate non-financial costs using standard approaches to undertaking cost-benefit analysis.
3. In cases where AICs may be either characterized as reduced loss of assets or reduced loss of income (or other cases where alternative approaches as possible), the methodology may use either accounting approach but not both.
4. AICs shall incorporate a discount rate of 3% for the first 10-year project period, declining to 2% for subsequent project periods.
5. Historical climate change may be employed in calculating AICs if and to the extent (temporally, going back in time from project inception), that the confidence outcomes requirements outlined in subsection 4.9 (IEF) are met. In other words, a project may consider the avoided impact costs resulting from project activities including climactic changes that have already occurred.
6. Avoided impact costs shall be calculated based on local currency and then use prevailing annual average exchange rates for the latest full year as noted by the

World Bank's Official exchange rate, found at: http://data.worldbank.org/indicator/PA.NUS.FCRF

to convert to Euros for the last month before project document submission, as noted by the International Monetary Fund at: http://www.imf.org/external/np/fin/data/param_rms_mth.aspx

7. To guide the project proponent in developing a clear and unambiguous measure of ICs and AICs that is as accurate and reflective of the community interests and insight as possible, the steps taken to develop the inputs discussed above shall be constructed with the input of the community(ies) involved in the project.

4.8.1 Projects' Avoided Impact Costs Only Consider Climate Change

Measures intended to reduce Vulnerability to climate change (as reflected in AIC calculations) may also reduce overall Vulnerability of a system (also as reflected in AIC calculations), even without climate change. However, for the purposes of calculating VRCs generated, only the reduction in Vulnerability owing to climate change (as measured in AICs) may be counted.

In effect, this means that Avoided Impact Costs calculations are the total AIC that a project is estimated to realise, minus the ICs not related to climate change. This is calculated by first developing a scenario that does not include future (or if historical climate change is used in VRC calculation past climate changes). The AICs of the project are estimated for the scenario without climate change. Then, the AICs of the scenario with climate change are calculated, and the difference is the AICs with climate change.

4.9 Income Equalisation Factor

The IEF is integral in the VRC issuance calculation and is an indicator of the adaptive capacity of communities. Income equalisation ensures that VRCs are not exaggerated in high income countries (due to potential damages being valued higher per capita) and not understated in poorer countries. As such, projects must establish with confidence the current or recent past (within two year) per capita income of all people living within the project boundary.

Projects may use approved government or third party per capita income data, and/or, if these data do not align with the community or are determined to be out-of-date, use sampling of the population with in the project boundary to estimate incomes following standard approaches to remove bias. To be conservative, per capita incomes shall be established to be the upper bound of the 90% confidence interval.

If a project is in an indigenous community, as defined in Framework Terminology, then it shall use the guidelines as developed in the Framework Annex, Standards for Indigenous Communities Consultation, to incorporate their income into financial baselines via appropriate methodology (for example, pro-rating of seasonal or falsely annualised incomes).

The World Bank's most recent GNI threshold for lower to upper middle income nations (see http://data.worldbank.org/about/country-classifications for current threshold) shall be divided by the per capita income calculation for the population within the project boundary to determine the Income Equalization Factor.

For each project period, the IEF shall be recalculated to account for changes in adaptive capacity and hence changes in the project baseline.

4.10 Additionality

The VRC generating project is the incremental investment and operations of the additional measures that take into account climate changes. VRC generating projects must demonstrate that they are Additional, meaning that the outputs generated by the Project would not have occurred without the financial benefit derived from certification.

There are two options for establishing Additionality for VRC generating projects:

1. Project based approach using a process of tests (for example, financial, technical viability, and regulatory surplus), and,
2. Performance based (for example, benchmarks or positive lists).

Project Proponents shall indicate the Additionality approach, and, if it is using a project-based approach, may develop a methodology that uses either/or financial, technical viability, regulatory surplus, or common practice analysis as the basis. Higher Ground Foundation may develop a separate additionality tool. Until further notice, however, the project proponent may apply the latest version of the UNFCCC's "tool for the demonstration of additionality" used for Clean Development Mechanism projects, found at:

https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-01-v7.0.0.pdf

Higher Ground shall establish a Positive List and set of Performance Benchmarks, on an ongoing basis. Project Proponents and other interested parties are welcome to assist in this process by forwarding project types to be considered for either benchmarking or positive lists, including justification for their inclusion.

Any Additionality tool, benchmark, or Positive List introduction or amendment will be made publicly available for public comment and consultation.

4.11 Local Stakeholder Consultation

Community, as distinct from the "project boundary" or "system" is defined as those potentially impacted as identified in general terms by the methodology and specifically in the project document. This is different from the system (= within project boundary).

As noted in Principles, Section 3, the community has the right to consultation on the acceptability of a VRC generating project.

Local stakeholder consultation means that members of the community, including the whole array of economic class, gender, age, ethnic, and religious groups among other constituents are made aware of the project and are given a real opportunity to let the project proponent know if they have objections or other feedback to the design and execution of the project. Consultation includes:

1. Providing an opportunity for community members to contribute to project design.

2. Informing the community of the (proposed design of the) project, educating it on VRCs, and the project's phases.

3. Giving all community members an opportunity to object to the project.

4. Recording for validation and registration the key findings of the consultations in the Project Document.

5. Determining at the methodology level the community rights when it comes to projects when they impact the community.

Furthermore, the project document shall also indicate what community concerns raised during community consultation shall be monitored and documented in the project monitoring reports. Individuals or groups within project "communities" are entitled to submit written documentation to The Higher Ground Foundation for mediation if they believe that the project proponents have not adequately addressed concerns.

The project methodology shall articulate the specific community rights, including the process for identifying potential negative impacts, and in cases where elements of a community (inside or outside the project boundary) are negatively impacted, outline the acceptable measures that may be taken to redress or compensate impacted parties.

The following are links (not endorsed by the Higher Ground Foundation) that may provide project proponents guidance on the consultation process:

http://www.sphereproject.org/resources/sphere-essentials/

http://www.humanitarianleadershipacademy.org/

https://lingos.org/

https://ifrc.csod.com/client/ifrc/default.aspx

4.12 Methodology Review and Approval

Any party may propose to The Higher Ground Foundation a project methodology for review and approval. Methodologies may be prepared independently of HGF, in collaboration with HGF, or commissioned for preparation by HGF.

All methodologies must follow the rules and procedures as defined in the VRC Standard Framework. A methodology may be presented with, or independent of an applicable project.

Methodologies are presented to The Higher Ground Foundation for review. The HGF shall convene a working group of independent experts (The Methodology Panel) to review the proposed methodology. During the pilot execution phase, The Methodology Panel shall work closely with Higher Ground Foundation and the methodology proponent. It is anticipated that during the full execution phase, this Panel shall become more "hands off" to ensure the integrity and fairness of methodologies.

Further details of methodology review and approval shall be developed in a Methodology Approval Guidelines annex.

4.13 Methodology Revision Process and Approval

Methodologies may be revised to reflect new climate adaptation know-how, improved understanding of impact cost estimation, climate projections, or for other reasons. Methodologies shall always be as broad in applicability as is possible, and revisions to include new scenarios, vulnerabilities, and project options are encouraged.

Project proponents or any party may submit to The Higher Ground Foundation a revised methodology for review and approval. The revised methodology must state the sectoral scope, and any particular project type under which it applies. If the scope or project type is new, this must be stated and justified.

Existing methodologies remain applicable until a project activity period is completed and a project is up for renewal. For renewal, the new methodology is applicable.

The review process follows the same procedures as for a new methodology review, as will be specified in the annex, Methodology Approval Guidelines.

5 Project Guidelines

VRC Project requirements (as distinct from methodology requirements) refer to the documentation required for all projects in order to be validated and registered by HGF. Format and required inputs for project documents are found in the project document template in Annex 15.

This section serves to provide general requirements related to VRC Projects. Project-level requirements for specific sectors and project-types shall be articulated in methodologies developed.

5.1 Project Document Template

Project proponents must provide a project document that adheres to and provides all information required in the Project Document Template. Key areas to be addressed in this document are:

1. A delineation of the scope and geographic area(s) within which all project activity instances shall occur. Such area(s) shall be defined by geodetic mapping based on a global coordinate system (e.g., geodetic mapping of entire project location in terms of latitude and longitude in degrees, minutes, and seconds). For the purposes of project documentation, project activities will occur:
    - where facilities and infrastructure build or enhancement/alteration, or activities, as specified in the project document occur, and;
    - within the locale to explicitly benefit from the methodologically derived adaptation activities as provided in the project document. For these purposes, locales will comprise:
        - permanent residents within geographic boundaries as delineated in the project document;
        - the operations of companies, sole traders, or similar concerns doing business within geographic boundaries as delineated in the project document;
        - real estate, both commercial and residential, as delineated within the project document;
        - capital and natural stocks (e.g., crops) as delineated within the project document

1. One or more determinations of the baseline for the project activity in accordance with the requirements of the methodology applied to the project.

2. One or more demonstrations of additionality for the project activity in accordance with the requirements of the methodology applied to the project.

3. A description of the central information systems and controls associated with the project and its monitoring.

5.1.1 Project Start Date

A proposed project start date, defined as the first day when VRCs are recorded under the registered project document's monitoring plan, must be provided in the project documents. All pre-implementation assessments (stakeholder consultation, additionality, securing rights, etc.) must take place prior to this proposed project start date.

An actual project starting date, as defined above, that is later than two years after the proposed starting date will invalidate the project approval, in which case the project must be resubmitted for validation and registration to account for changes in the baseline.

5.1.2 Timing and Approach to Crediting

Higher Ground shall issue VRCs ex-post for registered projects from the actual project start date.

The basis for VRC issuance for any period during the registered project life is the expected cumulative avoided loss or damage for the project period, divided by the time period for which credits are being issued. This is calculated in an independently validated, and subsequently Higher Ground registered project document. Monitoring and verification methodologies registered in the PD are the basis for calculating VRC issuance levels. In other words:

$$A = \frac{B \times X \times Y}{Z}$$

Where:
A = Credits issued for a given time period;
B = Time period for which credits are being issued (years);
X = % of effectiveness to avoid impact costs adhered to, as defined in the Project Document;
Y = Cumulative Anticipated VRCs for the entire project period;
Z = Project Activity Period (up to10 years)

The project document shall describe if permanence (see section 5.3.1.2) is or is not an issue and justify either determination. In instances where Higher Ground deems permanence of project vulnerability reduction to be uncertain, Higher Ground may require an alternative approach to the above.

5.1.3 Project Crediting Period

Projects may only be eligible for VRC certificate issuances during validated project activity periods. This section considers the length, renewal, and permanence requirements for project periods.

5.1.3.1 Activity Periods and Renewal

Projects shall be eligible for VRC certificate issuances corresponding to one or more renewable project activity periods of up to ten years. Project proponents shall be required to fix their project activity period duration at validation. Project periods must be 10 years to qualify for a subsequent renewal, and any project with a duration longer than 10 years must undergo revalidation and renewal after each ten-year period.

An active project reaching the end of an activity period (up to 10 years) must submit a new project document for validation and re-registration based on the currently approved methodologies. The new project document must include a review of the project baseline. See section 4.4 for guidelines for updating project baselines for new project activity periods.

5.1.3.2 Permanence

Over time, it is anticipated that a) the magnitude, and thus effects, of global anthropogenic climate change will alter significantly (i.e., worsen) while b) skill and precision of general global and regional climate modeling will improve.

Correspondingly, project work must be evaluated periodically for permanence following the re-validation / re-verification schedule described above and based upon pre-determined methodological and / or project design standards that must adhere to the following:

1. Physical infrastructure integrity – project physical capital, facilities, and infrastructure must maintain integrity and function in a manner sufficient to produce expected VRC flows over the course of the project. Unavoidable physical degradation or depreciation would be expected to reduce VRC generation during the course of the project must be taken into account in the project design and / or methodologies. Unanticipated degradation or damage must be accounted for at revalidation.
2. Continuation of necessary and appropriate activities – necessary maintenance and support activities must be adhered to as prescribed by the project design and / or methodologies. Unanticipated curtailment or alteration of appropriate activities must be accounted for at revalidation/ re-verification
3. Appropriate calibration of VRC generation against climatic and other baselines – revalidation of projects must be done in conformance with Modeling Requirements (Section 6). In specific recalibration of the climate baseline must be based upon up-to-date climatic modeling using the Representative Climate Pathway (RCP) 4.5 model projections used in the most current IPCC Assessment Report, unless otherwise specified in the methodology or project document.

5.1.4 Project Location and Physical Boundary

Project locations and geographical boundary will be articulated by providing latitude and longitude coordinates (degrees, minutes, and seconds) and placed on a map of the region. Following Section 4.3, impact cost factors identified in the methodology shall be described and used during community consultation, and the project document shall include a statement that the project boundary was determined in consultation with the community, describing the outcomes and any changes to boundary based on this consultation.

5.1.5 Right of Use, Ownership and Legal Title/Property Rights

A VRC is distinct from any underlying vulnerability reduction that may occur. A VRC represents a calculated unit of avoided impact costs (adjusted by an IEF).

The title to a VRC shall be received by the project proponent and may be transferred to any third party.

The registering body (The Higher Ground Foundation) is obliged to reconcile any conflicting claims of project related claims by communities.

5.1.6 Community Acceptance

The project document shall include a report on measures taken as required by the project-type methodology to demonstrate that community acceptance has been received. This shall include evidence of representative participation, consultations, and responses from community members. See 4.11 Local Stakeholder Consultation for further background on requirements.

5.1.7 Addressing Leakage

Leakage under the VRC Standard is net change of human vulnerability to climate change that occurs outside of the project boundary. As noted in the "avoidance of catastrophic harm" principle and in the methodology section of this Standard, the project shall identify and where feasible, quantify leakage. It shall also identify and propose measures to eliminate or reduce leakage.

As noted in the methodology section 4.10, "Community Consultation," the methodology shall outline approaches to identify potential impacts. Where some leakage is inevitable, the project must undertake stakeholder consultation with impacted communities and/or systems and receive consent for supporting suitable adaptation measures and/or providing compensation, following the approach as is also outlined in the methodology.

5.1.8 Deviation from Methodology

When an approved methodology is not directly applicable to a project, but the project is broadly similar to the projects to which the approved methodology is applicable, based on the nature (technology/measure) of the project, a request to the Higher Foundation for revision may be made in advance of requesting registration. This will be done following the format set out in the Project Document Template (Annex 15).

5.2 Validation and Verification

Validation is the independent appraisal of a project by a Higher Ground Foundation accredited validation/verification body (an Auditor) to determine whether the project complies with an approved VRC methodology, and, more broadly with the VRC Standard Framework. Verification is the independent appraisal of a project by an accredited auditor that determines whether the adaptation measures set out in the VRC Project Document have been implemented as expected. All projects require validation of the project in order for it to later receive VRCs, and all projects must have completed verifications prior to issuance of VRCs.

5.2.1 General Requirements

The project document shall be validated and the reporting on the ongoing operations of the implemented adaptation measures (the monitoring report) shall be verified by a validation/ verification body (auditor) that meets with eligibility requirements to be set out in the future by Higher Ground. Validation may occur before the first verification or may occur at the same time as the first verification.

Auditors are expected to follow guidance to be provided by Higher Ground in a to be developed VRC Validation and Verification Manual.

5.2.2 Validation and Verification Standards

Validations and verifications must follow the below requirements:

1. The level of assurance shall be reasonable, with respect to material errors, omissions and misrepresentations, for both validation and verification. Errors, omissions and misrepresentations above five percent relative to whether the adaptation measures taken (as set out in the Project Document) result in an accurate level of VRCs to be issued are considered material.
2. The validation or verification shall ensure conformance of the project with the VRC Standard Framework and specifically with the approved methodology.

5.2.3 Project Document Validations

An accredited validator shall review the project document against the applicable approved methodology and certify that the PD meets all requirements.

5.2.4 Monitoring

Monitoring must meet standards defined in project document monitoring methodology. Monitoring is the responsibility of project proponent, but monitoring may be outsourced to qualified third party.

5.2.4.1 Data and Parameters

The project proponent shall provide all data and parameters to quantify vulnerability reduction and per capita income within the project boundary in accordance with the methodology.

Quality management/quality assurance procedures shall be outlined in the project document and applied and established by the project proponent. Procedures to account for uncertainty in data and parameters shall apply as set out in the methodology.

For projects with seasonal difference in vulnerability, monitoring periods should be in year units.

5.2.4.2 Monitoring Plan

The project proponent shall establish an information management plan for obtaining, recording, compiling and analyzing data to quantify VRCs (as described in sub-section 5.3) and to report to the community monitoring schedules and monitoring results.

Where measurement and monitoring equipment is used, the project proponent shall ensure it is calibrated according to equipment specifications and/or relevant national or international standards.

5.2.4.3 Monitoring Report

The monitoring report shall include all data and information as set out in the project document. It shall use the VRC Framework Monitoring Report Template as outlined in the appendix to this Framework.

5.2.5 Accreditation of Validation and Verification Bodies

Bodies (individuals, companies, and other institutions public or private) must be accredited by The Higher Ground Foundation based on guidelines set out in an "Accreditation Manual."

The Accreditation Manual shall cover the following requirements:

- Sectoral scope of accreditation skills;
- Legal status;
- Scope of liability and financial stability;
- Management;
- Safeguarding impartiality;
- Competence;
- Information management;
- Process quality management;
- Complaint dispute and appeal processes

5.3 Project Non-Compliance

Any party may report to the Higher Ground Foundation on potential non-compliance by project activities against the Project Document, Methodology, or requirements given in the VRC Standard Framework. Upon receipt of a valid report of potential non-compliance, the Higher Ground Foundation may investigate to determine, at its sole discretion, whether the reported potential non-compliance has at least one of the following characteristics:

1. it continues over at least the majority of one monitoring period;
2. it is repeated/systematic;
3. it affects a significant area;
4. it causes significant damage

Upon the finding, at its sole discretion based on the above criteria, of a non-compliance condition. the Higher Ground Foundation may take actions including:

1. freezing the project proponent's account;
2. suspending the project, or;
3. cancelling the project

Cancelling the project leads to removal of related project VRC Certificates from the Inter-project Pool for Project Reversals.

6 Annex A: Impact Cost Estimation Confidence

An impact cost represents the quantification in economic terms of an asset or income stream that is vulnerable to the effects of climate change but which may be protected by intervention actions. To calculate impact cost factors, VRC projects may develop one or more impact cost factors that are linked analytically to climate (e.g., temperature, daily or monthly rainfall) drivers. It is therefore important to establish with sufficient confidence that impact cost factors used or developed for projects represent good climate inputs. For purposes of this framework, this is done preferentially by using results obtained from valid modeling practices, which are defined here as:

- widely accepted practice (e.g., textbook knowledge), or;
- peer reviewed modeling (e.g., published in technical journals).

In all cases, the Higher Ground Foundation will reserve the right to make final determination as to whether such methodologies are acceptable and publish positive lists of such practices. In cases where project or methodology impact cost calculations or algorithms are based on new modelling, these must in all cases adhere to the principles of reliability, robustness, and/or flexibility as defined in (6.1 - 6.3) below.

6.1 Confidence Standards

In obtaining climate vectors and other factors for input into the calculation of impacts costs, it is vital that confidence standards with respect to reliability, robustness, and flexibility be met. The Higher Ground Foundation strongly recommends that project proponents use models and/or model outputs produced by credible experts and institutions using established modelling methodologies appropriate to the respective output types. In terms of obtaining climate modelling results, Annex K provides a listing of Approved Downscaled Modelling Tools and Outputs; in terms of obtaining other modelling results, the developers can refer to relevant approved Methodologies.

For instances when the project proponent elects to undertake modeling of the climate projections and/or the impact cost factors themselves, or to commission them from a third party, the following confidence standards must be met:

1. Reliability (see Section 6.1.1 below)
2. Robustness (see Section 6.1.2 below)
3. Flexibility (see Section 6.1.3 below)

6.1.1 Model Reliability

The principle of reliability entails that models must be able to closely reproduce history; i.e., that, assuming accurately captured starting conditions, modelled outcomes are sufficiently close to actual outcomes.

For VRC project purposes, the reliability threshold will be determined by the divergence of the distributions of each of the simulated historic ('back-cast') model vectors from those of the corresponding historical data over the period of comparison, using a two-sample location test (e.g., Student's t-test) of the null hypothesis that the means of the two sets of data are equal.

Where back-casting is tested, the time interval for comparison must be at least 10 years.

6.1.2 Model Robustness

For the purposes of this framework, robustness is defined as a measure of self-consistency, or ability of a model or ensemble of models to provide consistent results with a coherent directionality. For instance, the series of results of a physics- or initial-condition perturbed runs of a model will be self-consistent if they produce climate vector results that are tightly grouped between model runs and generally move in the same direction (e.g., all-with the possible exception of insignificant outliers-show either an increase or decrease relative to baseline). The other vital characteristic is significance, or ability of the model/ensemble to provide results that are statistically distinct from random variation or a null hypothesis (no change).

Significance requirements: The mean of a model or the group mean of an ensemble of models must differ significantly from the baseline (current) mean. This is established by a test of the null hypothesis (e.g., the t-value of the difference in means must be outside of the threshold for p=.05) over the forecast period.

Self-consistency requirements: 80% of the results of an ensemble of models (e.g., physics-perturbed model runs) must agree in terms of sign (i.e., must consistently represent either a higher or lower value than the baseline value).

6.1.3 Model Flexibility

Based on the data and modeling standards derived above, a project can establish outcomes confidence by being able to clearly demonstrate reliability and robustness in terms of coherence to actual results and self-consistency. While the inherent controls and calibrations involved in a validated process will in many instances assure that these requirements can be met in the modeling process, in some cases where these criteria are difficult to establish a project might establish that it can still flexibly provide robust benefits. For instance, a project

might demonstrate that the intervention delivered can be suitably amended mid-project in response to actual conditions, or that the inherent project design serves to minimize or hedge against the effects of climate variability or system chaos (such as the use of all-weather crops or protection or forecasting systems). In light of the overarching design goal of the VRC program to avoid doing harm, flexible projects may be considered.

To demonstrate flexibility, one of the conditions below must be established:

The project outcome in terms is net positive in terms of impact cost at each extreme modelled outcome possibility (e.g., for the modelled outcome series producing the most pronounced climate vector series in terms of both positive and negative change). In such cases, VRCs will be calculated based on an outcome weighted basis; for instance, if four models predict more average rainfall and three less, then the average rainfall figure used to calculate VRCs will be 0.4 x (average of positive sub-ensemble) + 0.3 x (average of negative ensemble).

The inherent nature of the project involves protection against increasing variability or chaos in a system (this would involve, for instance, infrastructure protection against both drought and inundation or the development of hedging information systems that can provided seasonal weather forecasting to communities).

7 Annex B: Standards for Indigenous Communities Consultation

Introduction

Why Standards for Indigenous Community Consultation?

Indigenous peoples (often referred to as traditional peoples in Africa) are socially and economically distinct populations who live on every continent. Typically, they live in biologically and climatically diverse environments in biomes from which they derive their livelihoods. Those environments often also contain natural resources concurrently extracted, traded, and or degraded by outside industrial interests. It is in that multi-dimensional context, that customary land uses of indigenous communities are significantly impacted by climate change. Indigenous peoples historically adapted to pre-industrial climate change, but now face anthropogenic climate change. Indigenous peoples adopted, absorbed, and sought new technologies for thousands of years in climes from the arctic to the equator, but must now endure a scale of severity and exposure to climate change impacts disproportionate to their human populations.

Indigenous communities are cognizant of their need for assistance in climate adaptation, and of their own unique culturally shaped capacity to offer traditional knowledge to non-indigenous peoples. Where indigenous communities engage in VRC adaptation projects, they can improve their reliance and diminish their vulnerability in climate impacts. Globally, indigenous peoples work as pastoralists, fishers, wild food gatherers, farmers, and hunters. They live in forests, arid lands, mountain and arctic glacier areas, as well as coastal and small islands, as sedentary, semi-nomadic, and nomadic peoples. Indigenous peoples represent part of Earth's great diversity of peoples, cultures, and languages; their cultures are inseparable from lands they call home.

Indigenous communities historically and contemporarily experienced displacement, dispossession, and relocation due to colonization and resource extraction. Such displacement has also led to over-exploitation of natural resources by indigenous peoples in some contexts. Land dispossession, customary indigenous land use, indigenous cultures, and inequitable socioeconomic development, are causes of indigenous social and economic marginalization. For these environmental, climatic, social, economic, and cultural reasons, the IPCC recognizes that indigenous and traditional communities are among the most vulnerable to climate change impacts on a global scale.

Indigenous community adaptive responses however must balance their core social needs with the reality of shared resources and climate change impacts. To mitigate against further marginalization while indigenous communities face severe and long term climate change impacts, principles of social protection are called for. The Vulnerability Reduction Credit (VRC) Framework recognizes international principles of social protection to improve indigenous and traditional communities' reduction of their vulnerability to climate change impacts. Therefore these Standards for Indigenous and traditional peoples' community consultation are based on international principles. The principles embedded in these Standards include: community assessment, prior consultation, free and informed consent, biodiversity, traditional

knowledge, and a culturally sensitive valuation of livelihoods and cultural assets. The Standards provide a common platform for implementation of social protections in VRC adaption projects.

The Standards give all parties involved in adaptation planning and project implementation a set of parameters and expectations for indigenous community adaptation projects over ten years. They allow for the integration of various nuanced and diverse methods for indigenous and traditional communities' adaptation. They provide a path forward for second party private and public proponents of climate adaptation projects. They set out specific benchmarks for the VRC validation and registration processes. By engaging in the VRC Framework, indigenous and traditional communities can instill local practice of globally recognized social protections to improve their resilience to climate change impacts.

From the stars, it is obvious we all live in one world. Indigenous peoples are very much part of that world. Coordinated efforts for adaptation to climate change impacts increase all peoples' prospects for survival and adaption to climate change. Engagement across all societies will make us more resilient to climate change impacts.

Overview of Standards for Indigenous Communities Consultation

An overview of the 10 Standards for Indigenous Community Consultation Standards are provided in Table 1 below which contains the ten Standards, a brief summary of their purpose, and corresponding sections from the main VRC Framework. After the introduction, Terms of Use & Legal Status contain relevant definitions and citations are listed. In the text, each Standard follows the same format: Standard Title, corresponding VRC framework sections, objectives, and steps. Standards 1-5 comprise the Assessment, Consultation and Community Consent Phase, and Standards 6-10 comprise the Project Implementation Phase. Both phases contain principles based on recognized international rights.

A separate Guidance document is forthcoming. A Resources for Review of Standards for Indigenous Community Consultation (SICC) document may assist in development or identification of appropriate methodologies.

The sequence of the ten Standards and corresponding sections in the VRC framework represent an entire 10-year VRC project life cycle. Where VRC Framework Sections are cited for VRC project obligations, the Standards are supplemental to requirements in the VRC Framework, and the VRC framework holds priority.

Table 1: Standards for Indigenous Communities Consultation

Standards	Purpose	Corresponding VRC Framework Sections
Standard 1: Indigenous Community Assessment.	To identify and document the social, economic, cultural, and physical parameters of the indigenous community.	4.11 Local Stakeholder Consultation 5.1 Project Document Template
Standard 2: Prior Consultation with Indigenous User Groups.	To provide an opportunity for community socioeconomic groups to contribute to project design.	4.11 Local Stakeholder Consultation 4.5 Project Design
Standards 3: Prior Consultation with Indigenous Communities	To consult with the whole community on project design, informing them about proposed benefits for socio-economic groups, and educating the community on VRCs.	4.11 Local Stakeholder Consultation 4.6 Project Design 4.9 Income Equalization Factor 5.0 Project Requirements, 6 Annex: Impact Cost Estimation Confidence
Standard 4: Part I: Valuation of Customary Land Uses	To calculate values for Indigenous communities' customary land uses, To calculate values for indigenous communities' cultural heritage sites	4.8 Estimating Avoided Impact Costs 4.12 Methodology Review and Approval 4.13 Methodology Revision Process and Approval

5.1.4 Project Location and Physical Boundary

Standard 5:

Free and Informed Consent.

To give all community members an opportunity to object to the project, its components, or assumptions. Recommendations can be made by the community for modifications for consideration of project components.

4.11 Local Stakeholder Consultation

5.1.6 Community Acceptance

5.2.4 Monitoring:

5.2.4.1 Data and Parameters

5.2.4.2 Monitoring Plan.

Standard 6: Recording Consultation Findings.

To record key findings of the consultations and consent request in the Project Document, and to record for validation and registration.

5.0 Project Requirements

5.1 Project Document Template

5.2.4.3 Monitoring Report

Standard 7: Rights and Responsibilities During VRC Project Implementation.

To delineate indigenous community and project proponent rights and responsibilities when VRC projects during the over 10-year implementation process.

Definition: materiality, 5.2.2 Validation and Verification Standards,

4.8 Estimating Avoided Impact Costs

4.12 Methodology Review and Approval,

4.13 Methodology Revision Process and Approval

5.2.4.3 Monitoring Report

6.1.3 Model Flexibility

Standard 8: Property Rights and Indigenous Customary Land Use.

To distinguish how property rights and indigenous customary land use apply to VRC projects.

5.1.4 Project Location and Physical Boundary

5.1.5 Right of Use, Ownership and Legal Title/Property Rights

Standard 9: Multiple Use Areas and Multiple Users.

To Interpret overlapping boundaries, multiple use areas, and multiple users for VTC projects.

5.1.5 Right of Use, Ownership and Legal Title/Property Rights

Standard 10: VRC Ownership for Indigenous Communities

To clarify community and project proponent rights of VRC ownership and transferability.

5.1.5 Right of Use, Ownership and Legal Title/Property Rights

7.1 Principles, Terms of Use, and Legal Status References

Principles, Terms of Use, and Legal Status References

Terms of Use:

Sources for international principles of social protections applied to the ten Standards for Indigenous Community Consultation in VRC project development and implementation include: United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP 2007), the International Labor Organization convention 169 (ILO 169) , and jurisprudence, as well as guidance from regional bodies such as the Inter-American American Human Rights Commission, the African Commission on Human and Peoples' Rights, and the UN Special Rapporteur on the Rights of Indigenous Peoples in Asia Report (2013)

The Terms of Use & Legal Status specifically define common legal concepts, terms of use, and descriptions of legal status regarding indigenous communities. The Terms of Use & Legal Status listed below address collective land rights, land and natural resource rights, self-government, indigenous peoples' own social, cultural, and legal institutions, and the extractive, energy, and development industries' obligations.

Together, the principles, terms of use, and legal status references provide a conceptual context for all VRC projects proposed for indigenous communities. All VRC projects proposed for indigenous communities are subject to international principles contained in.

Where national standards (via legislation, regulation or customary practice) require lower thresholds than the Standards for Indigenous Community Consultation herein call for, these Standards are binding. Where these Standards for Indigenous Community Consultation represent a higher threshold of social protection, they prevail in addition to and beyond national norms. Where national standards may exceed these Standards for Indigenous Community Consultation, proposed adherence to the higher national Standards require documentation in the VRC Project Document and an HGF approved methodology in a submission for approval. The HGF is the ultimate arbitrator of what is a "higher" and "lower" Standard. For all communities assessed and identified by VRC project proponents as indigenous or traditional communities, the Terms of Use & Legal Status, and all 10 Standards contained herein are binding.

Terms of Use:

Biological Diversity

"Biological diversity" 'means the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part: this includes diversity within species, between species and of ecosystems'. Convention on Biological Diversity, Article 2, Convention On Biological Diversity, United Nations, 1982.

Customary International Law:

"Customary international law refers to international obligations arising from established state practice, as opposed to obligations arising from formal written international treaties. According to Article 38(1)(b) of the ICJ Statute, customary international law is one of the sources of international law. Customary international law can be established by showing (1) state practice and (2) opinio juris.". Cornell University Law School, Legal Information Institute. Accessed 13 May, 2017. Note: Reference on Indigenous Customary Law is stated herein. Also see the extended discussion on Customary International Law and Indigenous Peoples Customary Law in the Guidance for Standards for Indigenous Community Consultation.

Customary Indigenous Land and Sea Use:

Indigenous use of natural resources (flora, fauna, and marine life) in their traditionally inhabited or seasonally accessed land and or sea areas. Territory collectively held by indigenous peoples is inherently part of the make-up of indigenous communities. Even countries which are not signatories to either convention recognize the right of self-identification. (Reference: UN Declaration of Rights of Indigenous Peoples 2007 (herein: UNDRIP): Articles: 9,18; ILO 169: (art. 6.1.a). [Reference on lands, territories, and natural resource rights: The Provisions on Lands Territories, and Natural Resources in the UN Declaration of the Rights of Indigenous Peoples, Mattias Ahren 209-213, Making the Declaration Work, The United States Declaration on the Rights of Indigenous peoples, Claire–Charters- Stavenhagen, eds. IWGIA, (2009)]

Designated Customary Leadership.

Indigenous and traditional communities often choose their own representative chosen leadership. Some leadership is democratically elected, other is hereditary, while other leadership may be functional, or religious in nature. Where different forms of leadership do not equitably include women (in patriarchal or patrilineal societies); in such communities requesting meetings with women for them to assign leadership for the purposes of the VRC project is warranted. In a minority of communities where women are predominant in leadership (martrilocal or matrilineal societies) and do not equitably include men, requesting meetings with men for them to assign leadership for the purposes of the VRC project is warranted. Women and men in indigenous communities must inform the assessment, consultation, and implementation phases of VRC projects.

Free and Informed Consent

(principle derived from UNDRIP 2007: Main Article:32.2; other relevant applications: 10, 11.2, 19, 28, 29.2).

[Reference: Free and Informed Consent: The United Nations Declaration on the Rights of Indigenous Peoples: The Foundations of a New Relationship between Indigenous Peoples, States, and Societies, Adelfo Regino Montes, Gustavo Torres Cisneros, 157-158, Making the Declaration Work (2009).]

After an initial assessment and consultation are carried out (prior to project consent by a community) a draft final Project Plan is presented to the whole community (or their designated customary leadership) for their Free and Informed consent.

Free, in this context, means:

the proposed VRC project is presented without any intention or effect of a Quid Quo Pro or other form of material or monetary exchange as compensation outside the prescribed conditions of the project proposal. The VRC Project shall be free of Leakage or the "net change of human vulnerability to climate change that occurs outside of the project boundary". (See VRC Framework: Section 5.8 Leakage, Redressing Measures and Compensation)

Informed, in this context, means:

The full Project Plan is discussed in the appropriate local indigenous language where warranted in terms of its full direct future effects on the socio-economic life of the community; including the VRC project design, project scope, its beneficiaries, affected user groups, main project activities, impacts on land or sea, and VRC ownership and transferability rights and responsibilities.

Community consent, in this context, is:

An agreement for a proposed climate change adaptation VRC project for a stated time period by the community assembly or designated customary leadership in keeping with the customary designated leadership of the community.

Indigenous (Local) Language: (see: UNDRIP 2007: Article 13:2).

Indigenous language communities may be smaller or much larger than the total indigenous population that is encompassed by the proposed VRC project. Language interpretation must be carried out in the dominant language's local dialect or language variant of the local indigenous community. If 25% or more of the indigenous population in the project boundary are speakers of their indigenous language, then all consultation, consent, and reported monitoring activities shall be given in the local indigenous language. Local estimates of speakers are acceptable. National languages can be used in interpretation for bi-lingual communication. Dialects are variants of spoken languages, and if dialects or variants are not mutually intelligible among speakers, secondary interpretation shall be provided. Spoken languages are most often the preferred form of communication. Technical assistance is recommended. Unacceptable practices include: no children 15 years old or younger are used as interpreters, interpreters without technical knowledge in interpretation of project design, project beneficiaries, etc. are not qualified. Generally, interpretation requires a doubling of meeting time for prior assessment, prior consultation, and project presentation. When needed, local indigenous language interpretation shall be monetarily or materially compensated at current market values.

Indigenous Peoples

The definition of indigenous peoples and their representation follows UN DRIP 2007 (Article 3) and or ILO 169, depending on the host country where the proposed climate change adaptation project is to take place. Both definitional texts support indigenous peoples' self –identification as an international human right, and that has become international customary law. The ILO preceded the United Nations, and adaptation of its Convention 169 is mostly limited to Latin American states. The working definition in the UN prior to UNDRIP 2007 relied on the concept of pre-colonial peoples with historical land use in their customary or traditional homelands. Regional guidance based on historically derived distinctions on indigenous peoples can be reviewed for Africa at: African Charter on Human and Peoples' Rights (2005), and in Asia, in the Report of the Special Rapporteur on the rights of indigenous peoples, James Anaya, on the consultation on the situation of indigenous peoples in Asia (2013). National legislative and constitutional reforms that seek to incorporate the principle of self-determination are on-going. For example, see: UN Report on The Situation of Indigenous Peoples In Nepal (2013).

[Reference on Indigenous identity: The Right of Indigenous Peoples in the Post-Declaration Era, James Anaya, 191, Making the Declaration Work, IWGIA, (2009)

Indigenous Peoples' Customary Law

Indigenous peoples' customary law concerns the laws, practices and customs traditionally used by indigenous peoples and local communities, such as use and access to resources which includes land, forests and water, maintenance of cultural heritage and knowledge systems and access to spiritual places. [1] Indigenous peoples' customary law is separate from and distinct from customary international law which is a source of international public law where practices of States set legal precedent. [1] WIPO Background Brief No. 7, Customary Law and Traditional Knowledge, 2016. Note: See also extended discussion on International Customary Law and Indigenous Peoples Customary Law in the Guidance for Standards for Indigenous Community Consultation.

Intellectual Property

see: Traditional Knowledge.

Prior Consultation (UN DRIP: Articles: 15, 17.2, 36)

[In principle], Prior Consultation in the context of indigenous communities under-going climate change impacts, means:

Inquiring directly with indigenous communities about their specific adaptation needs according to the values they hold in regards to how climate change adaptation projects shall likely impact their communities; both positively and negatively.

[In practice], Prior Consultation means:

Identifying, through dialogue with indigenous community members, which socio-economic groups within an indigenous community shall be most affected in light of the proposed VRC climate change adaptation project, e.g. pastoralists, fishers, natural resource users, etc.; as

well as how women, elderly, youth, or other social group might be significantly and directly affected by specific project impacts.

Significant in this context means: VRC project activities would alter their daily customary livelihoods or cultural roles within their community.

Project Administering Organization (PAO). The organization of record responsible for all reporting requirements in the Project Document and approved methodology.

Sustainable use: means the use of components of biological diversity in a way and at a rate that does not lead to the long-term decline of biological diversity, thereby maintaining its potential to meet the needs and aspirations of present and future generations. Preamble, Convention On Biological Diversity, United Nations, 1982.

Traditional Knowledge:

Dynamic knowledge systems & life ways referring to indigenous ways of knowing resulting from close relationship to the environment and developed over thousands of years. Considering Traditional Knowledge in Climate Change Initiatives, Preston Hardison & Karletta Chief, Rising Voices 3 https://risingvoices.ucar.edu/sites/default/files/Considering%20Traditional%20Knowledge.pdf, last accessed 3 July, 2016.

Traditional Knowledge (TK), Traditional Environmental Knowledge (TEK) , and Indigenous Knowledge (IK) are synonymous. For guidelines on uses in VRC projects where "tribal" legal status is legally recognized by states and is applicable, see: Guidelines for Considering Traditional Knowledges in Climate Change Initiatives1-4, 6-7.

For protection of intellectual property, see: WIPO Background Brief No. 7, Customary Law and Traditional Knowledge, 2016.

User Group(s): group(s) of indigenous which share/harvest/fish/gather/cultivate/hunt a common natural resource (fauna, flora, marine life) within their customary (traditional) land or sea use areas.

VRC [climate change adaptation] Project: A climate change adaptation project proposed for Vulnerability Reduction Credit registration and validation by the Higher Ground Foundation.

Legal Status References:

Best Practices: Prior Consultation & Customary International Law References:

For best practices of prior consultation and free and informed consent in regards to customary land uses and cultural practices is the OAS IACHR document, Indigenous and tribal peoples' rights over their ancestral lands and natural resources, Norms and Jurisprudence of the Inter-American Human Rights System, (OAS- Inter-American Commission on Human Rights, 2010), p. 119.

Customary International Law References:

Kichwa Indigenous People of Sarayaku v. Ecuador, Judgment of 27 June 2012. Inter-American Court. (Kichwa case in Ecuador)

English Summary: http://www.corteidh.or.cr/docs/casos/articulos/resumen_245_ing.pdf,

Full decision: http://corteidh.or.cr/docs/casos/articulos/seriec_245_ing.pdf

African Commission of Human and Peoples' Rights v The Republic of Kenya, African Court on Human and Peoples' Rights May 28 2017. (Ogiek case in Kenya)

http://www.africancourt.org/en/images/Cases/Judgment/Application%20006-2012%20-%20African%20Commission%20on%20Human%20and%20Peoples%E2%80%99%20Rights%20v.%20the%20Republic%20of%20Kenya..pdf

Prior Consultation References: See: (1) "Consultation and consent: Principles, experiences and challenges" Presentation by the United Nations Special Rapporteur on the rights of indigenous peoples, Victoria Tauli-Corpuz, for the International Colloquium on the free, prior, informed consultation: International and regional standards and experiences (Mexico City, 8 November 2016). As per the Tauli-Corpuz presentation: The development of the international legal basis for states adherence to the principle of prior consultation is fold-fold and on-going: 1) national legislation, 2) regional practice (ex. ILO in Lat. America), 3) universal and regional human rights instruments of general application and the interpretative jurisprudence, and 4) constitutional reform. Introduction, p.1, (2) 1 for Legal sources of consultation and consent, p2, (3) See, a: CERD, General Recommendation No. 23 (1997), art. 4.d., b: Report of the Special Rapporteur on the rights of indigenous peoples James Anaya to the General Assembly, A/64/338 (4 September 2009), paras. 43-49., and c: I/A Court H.R., Case of Kichwa Indigenous People of Sarayaku v. Ecuador, Judgment of 27 June 2012 ["Sarayaku Case"], para. 164., 4) Victoria Tauli-Corpuz, ibid, 3

7.1.1 Standard 1: Assessment of Indigenous Communities

Standards for Indigenous Communities Consultation

A VRC Guidance to Standards for Indigenous Community Consultation accompanies these Standards for interpretation of their application to Specific VRC projects and to indigenous communities. Methodologies can and will vary according to climes, biomes and indigenous communities and are therefore not mandated within Standards. Contemplation of a methodology for submission to the Higher Ground Foundation should fit both the local climate change impacts and the social and economic composition of the specific indigenous community, and also comply with the Standards.

(Note on Standards 1-4: Project Proponents shall commence with Standard 1, Assessment of indigenous communities, but then may reverse the order of Standard 2, Prior Consultation with User Groups, with Standard 3, Prior Consultation with Community, but then must conclude with Standard 4, Free and Informed Consent.)

Standard 1: Assessment of Indigenous Communities.

Relevant VRC Sections: 4.11 Local Stakeholder Consultation, 5.1 Project Document Template

Objectives: To determine if a community proposed as a potential partner for a VRC project is an indigenous community, the community requires accurate identification. One objective of the Indigenous Community Assessment is to identify the social, economic, cultural and physical parameters of the indigenous community. A second objective is to ensure that vulnerable social groups and individuals are identified within the community, just as the community itself is identified as vulnerable to climate change impacts. A third objective - is to gauge the community's autonomous approach to climate change adaptation. A forth objective is to identify their participatory role(s) in biological diversity when it relates to livelihoods affected by climate change impacts. A fifth objective is to initially discuss if their traditional knowledge, including genetic information, needs protection. A sixth objective is documentation of the community features mentioned above, whether it is completed by institutions, NGO's, consultants, and experts are who already familiar with specific local indigenous communities, or they are new to the communities.

Required Steps: Assessment of Indigenous Communities. 1. Document the names & contact information of the members of the designated customary leadership (DCL) of the local indigenous community and the form of decision making at community level, or where applicable, federation level, 2. If not presented in designated customary community leadership, request contact with women (or men) to request they appoint leadership of their gender to assess their socioeconomic roles for the VRC project, 3. Identify the primary local indigenous language when spoken by a minimum of 25% of population or more, 4. Identify significant cultural practices including traditional knowledge that may be affected by project goals, 5. Identify the potential physical project boundary area, 6. Identify social groups and genders that may be adversely and or positively affected by project goals (especially the most vulnerable in keeping with HR standards: women, young, elderly, disabled, etc.) 7. Identify economic groups that may be affected by project goals (in informal economy: natural resource user groups, main livelihoods, and % of persons in out migration), in formal economic activity: indigenous owned businesses and or wage earners that maybe affected by project goals), and 7. Identify likely environmental impacts including threats to biodiversity relevant to user group livelihoods from project goals; positive and negative, 8. Determine if the community has a protocol to protect their own traditional knowledge (TK), including relevant genetic information, from exploitation (e.g. from bio-prospecting) or unauthorized documentation of TK by outside interests, 9. Qualified local indigenous language interpreters shall be used for assessment, consultation, consent, and monitoring activities for indigenous communities where 25% or more of the population speak a local indigenous language. Qualified interpreters are >16 + yrs. old and have enough of a command of technical terms used by the project to interpret in the indigenous language to community members; interpreters shall be paid by project proponents according to fair market value in cash or in kind; preference is given to documented prior interpreter experience, and the local customary designated leadership can be an arbiter if an interpreter's qualifications are undocumented, or various candidates appear equally qualified, 10. Indigenous communities or their designated customary leadership are given contact information (country office address, phone number, and email) for the HGF / or designated VRC Auditor to verify

authenticity of the VRC project proponent, 11. the results from the above assessment activities of 1-10 shall be reported in translation in the Project Document.

7.1.2 Standard 2: Prior Consultation with User Groups

Standard 2: Prior Consultation with User Groups

Relevant VRC Section(s):4.11 Local Stake-holder Consultation, 4.5 Project Design

Objectives: To identify user groups and other socio-economic groups potentially impacted by project activities, and to consult with them about their customary land uses, traditional forms of livelihoods, and formal economic activities. To discuss their views on adaptation and how to reduce their own vulnerability to impacts. To identify cultural roles potentially impacted by VRC project activities, and how they may reduce their vulnerability to climate change impacts. To survey and or measure the costs of impacts on their economic activity and cultural roles, to protect traditional indigenous environmental knowledge from exploitation while encouraging its productive use in adaptation to climate change. To document all user groups' information identified in the five objectives above.

Required Steps: Prior Consultation with User Groups

1. Project proponents shall consult with community members to identify and analyze socio-economic groups in indigenous communities and their daily customary livelihoods or cultural roles that would be directly affected by a proposed VRC project, 2. User groups, genders, or social groups, or cultural roles potentially impacted by potential VRC project activities, as well as youth, elderly or other vulnerable groups with the community thus impacted shall also be identified, and consulted. 3. User groups, genders, vulnerable social groups, and cultural roles shall be consulted over their customarily used lands and those lands and activities where potentially impacted by VRC project activities, 4.Community Designated designated representatives shall be contacted to discuss rights and risk to exposure of their traditional knowledge (TK) / traditional environmental knowledge (TEK) / indigenous knowledge (IK) including genetic resources to outside parties; if no TK community protocol is presented by the community - to describe such risks use these references for guidance:Guidelines for Considering Traditional Knowledges in Climate Change Initiatives1-4, 6-7, Convention on Biological Diversity; Article 15). Given that 100 or more countries legislate free access to public information; and traditional indigenous knowledge, once transmitted to a 2nd party may be subject to private copyright and or public document transparency, indigenous traditional knowledge protection remains dependent on limiting transfer of TK/TEK/IK, therefore indigenous communities that delimit exposure to such knowledge may remain more protected, and such areas of traditional knowledge are to be identified only categorically and not specifically in the project document

after community review by their designated customary leadership when allowed by the indigenous community (knowing it may be subject to private copyright and or public knowledge), disallowed , or delimited in scope and detail for reporting. (see resources for TK/TIEK/IK., Considering Additional Knowledge in Climate Change Initiatives, 5. Consultations shall be conducted in local indigenous languages where 25% or more of the population speak the local indigenous language; full interpretation must be carried out by competent speakers, 6. Indigenous communities or their designated customary leadership are given contact information (country office address, phone number, and email) for the HGF / or designated VRC Auditor to verify authenticity of the VRC project proponent, 7. The results of the consultation with User Groups on the six steps above in translation shall be reported in the Project Document.

7.1.3 Standard 3: Prior Consultation with the Indigenous Community

Standard 3: Prior Consultation with the Indigenous Community

Relevant VRC Sections: 4.11 Local Stakeholder Consultation, 4.6 Project Design, 4.9 Income Equalization Factor, 5.0 Project Requirements, 6 Annex: Impact Cost Estimation Confidence

Objectives: To identify how user groups, genders, or social groups potentially impacted by project activities will be affected, To report on what customary land uses, traditional forms of livelihoods, and formal economic activities will be improved through adaptation, to report on what local knowledge was identified that can be used in project design to reduce community vulnerability, To report on how cultural roles would be potentially impacted by VRC project activities, To report on the costs of impacts on their economic activity and cultural roles, To document all user group information identified in the five objectives above.

Required Steps: 1. VRC project proponents shall then inform the whole community about the project scope, design, and length; the community's and project proponents' responsibilities, the nature and vale of VRC's, 2. the presentation shall cover the proposed income equalization calculations per each identified indigenous user groups, genders, vulnerable social groups, and cultural roles and cultural sacred sites potentially affected by the VRC project, as well as estimates of impact costs and avoided impact costs, 3, the VRC project proponents shall inform the whole community on community rights related to the project, 4. The VRC project proponents shall discuss with the community what measures may be taken by both parties to protect traditional knowledge if and where it would be affected by proposed VRC project activities. 5. Project proponents will conduct the meeting with interpretation in the local indigenous language where 25% or more of the indigenous community speak a local indigenous language, 6. Community user groups, genders, cultural roles, cultural roles, and vulnerable social groups (youth, elderly, physically impaired, etc.) will be asked if there are additional recommended changes that would be consistent with the overarching goals of the

project, 7. Indigenous communities or their designated customary leadership are given contact information (country office address, phone number, and email) for the HGF / or designated VRC Auditor to verify authenticity of the VRC project proponent, 8. The results of the above seven steps in community level consultation in translation shall be reported in the Project Document.

7.1.4 Standard 4: Valuation of Customary Land Uses & Cultural Heritage Sites

Standard 4: Valuation of Customary Land Uses & Cultural Heritage Sites

Part I: Valuation of Customary Land Uses

Relevant VRC Section(s): 4.8 Estimating Avoided Impact Costs 4.12 Methodology Review and Approval, 4.13 Methodology Revision Process and Approval, 5.1.4 Project Location and Physical Boundary

Objectives:

The primary objective is to observe, document, and process a series of analytical steps in calculating the monetary value of the possible effects (positive or negative) of VRC projects on customary indigenous land and natural resource use (in the informal economy). A second objective is to consider that indigenous communities comprise a wide range of economic activity: a) activity mostly in the informal sector, b) mixed informal and formal economic activities, or c) predominately formal economic activities. A third objective is to consider indigenous communities engaged in natural resources use in their customary land use areas are often also defined socially by economic activity in the informal sector, however, in communities of mixed informal and formal economies, they are often inadequately identified as diverse natural resource user groups.

Required Steps Part I:

The VRC project proponent shall: 1. document in the Project Document a series of steps when calculating the IEF for potential (or actual) indigenous community damages and losses:

1. Document the relevant climate reports from down-scaled models as per the VRC Methodology (Section 4.0), 3. Determine if there are actual or potential climate change impacts from down-scaled climate reports or observational reports, and if so, then proceed to 4, Identify the biome where indigenous communities inhabit, 5. Identify the types of CC impacts, 6. Identify customary indigenous land use activities in the areas of impacts, 7. Identify natural resource user groups impacted by

adverse CC impacts, and 8. Calculate impact cost factors using IEF market valuation of customary land uses (Local / Municipal/ County / Provincial, National / International) or equivalents using the most locally accessible data, and subsequently converted to Avoided Impact Costs in euros and IEF in US dollars. Click on Sample Valuation
below:

Table_2_Sample_Valuation_of_indigenous_Customary_Land_Use.pdf

Part II: Valuation of Indigenous Communities' Cultural Heritage Sites

Objective: The primary objective is to address potential damage and loss to cultural sites where associated economic activity exists, by calculating cultural values of such sites in economic terms as VRC adaptation projects, a Second objective is to reduce the vulnerability of related user groups and culturally distinct roles when such user groups or cultural roles have an identifiable and site associated economic function. A third objective is to consider that prioritizing calculations of replacement stock (vs. flow) in this situation may be warranted; depending on the scale of the original site, and damage(s) and loss(s) incurred. Consult Guidance for further detail.

Required Steps Part II: 1. Project proponents shall inquire with members of the local customary designated leadership about Climate Change impacted cultural structure(s) and or sacred landscape(s) to identify potential impacts based on project goals, and document where they pose damages and losses to the indigenous community; 2. To safeguard the intellectual property of indigenous communities' architecture or landscape sites potentially affected by VRC project activities, project proponents shall document and report to the VRC auditor (as part of project document) architectural and or landscape features with qualitative values ranked by the community or designated customary leadership for cultural heritage site(s) or landscape(s), 3. If not explicitly approved by the community for future public knowledge or use, project proponents shall document and report without identification of specific sacred features of architecture or specific sacred feature(s), cultural heritage site(s) and cultural landscape(s), and 4. Project proponents shall calculate and report the potential estimated economic cost as a stock capital loss or a loss of income flow through associated economic activity; whichever is greater, and 5. Project proponents shall present to the community the estimated monetary value in terms of potential project impacts (see Standard 3: Prior Consultation at the Community Level), 6. VRC project proposals, documents, and monitoring reports will shall refer to the architecture and or landscape feature(s) in those general terms (excluding GIS location or identifying images of sacred spaces explicitly), but shall document and report site general parameters with geo-data when approved by the indigenous community's designated customary leadership. 7. Indigenous communities shall be advised to seek legal protective status for sacred site(s) or sacred landscape feature(s) where a VRC project proponent and or VRC auditor views the project as inadequate to protect its integrity given anthropogenic pressures, 8. Where cultural sites have extant or previous economic activity associated with established public site access (i.e. a baseline measure of flow), and when approved by a local community's designated customary leadership in the consent phase (see Standard 4), for rehabilitation, VRC projects may seek to compare more robust

stock repair/replacement costs with flow calculations for losses to income, as avoided impact.

7.1.5 Standard 5: Free and Informed Community Consent

Standard 5: Free and Informed Community Consent

Relevant VRC Sections: 4.11 Local Stakeholder Consultation, 5.1.6 Community Acceptance, 5.2.4 Monitoring, 5.2.4.1 Data and Parameters, 5.2.4.2 Monitoring Plan.

Objectives: To prevent any coercion, undue remuneration, or quid pro quo for community project consent by any project proponent, community member, or third party attempting to influence community level decisions regarding any aspect or phase of VRC projects, To inform the community of the long term commitment and the potential positive and negative impacts on their community, and to facilitate an open decision by the whole community or their designated customary leadership for consent; with or without conditional approvals that require VRC project modification before implementation, or their rejection of the VRC project.

Required Steps: VRC Projects shall: 1. Give prior notice (minimum 15 or more calendar days' notice required) of a community meeting to present the project plan proposal, 2. The Project shall present their project in a formal written and oral proposal competently in the primary local indigenous language (see Terms: local indigenous languages for conditions) incorporating any requested and accepted modifications offered during the community level consultation, in addition to any national or other common language used, 3. Project Proponents shall answer questions from the community orally, 4. Project Proponents shall orally address concerns and or objections raised by community members (not restricted to specific socioeconomic groups only), 5. Identify and inform the community on the 11 components of the project document, 6. Specify potential project impacts on the community including values of income equalization factor calculations (i.e. user group annual income) where applicable for all affected user groups (as per Standard 4: Part I, steps 6 & 7) and for cultural structures and sacred landscapes (as per Standard 4: Part II steps 1 & 4) where applicable, 7. Inform the community about a plan for protection of traditional knowledge and where appropriate, genetic resources, if the community identified TK as knowledge to protect during prior consultation, 8. Seek and receive consent (approval with or without modifications to the Project Plan) for the proposed project. Communities or their customary decision making body can appoint a follow up committee(s) for the purpose of incorporating last minute changes in order to finalize approval if given provisionally with a proviso for stated modifications, 9. Indigenous communities or their designated customary leadership are given contact information (country office address, phone number, and email) for the HGF / or designated VRC Auditor to verify authenticity of the VRC project proponent, 10. The results of the nine steps above for the community level meeting in translation shall be reported in the Project Document including any modifications incorporated into the final written proposal.

7.1.6 Standard 6: Recording Consultation Findings

Standard 6: Recording Consultation Findings.

Relevant VRC Sections: 5.0 Project Requirements, 5.1 Project Document Template, 5.2.4.3 Monitoring Report

Objectives: To document and transmit to the VRC auditor community engagement of the VRC project proponent with the indigenous community results of the community assessment, prior consultation with user groups, prior consultation with the community, and the community decision(s) regarding consent, to report on calculated IEF and AIC for all affected user groups, genders, social groups, and cultural roles, and the monitoring plan in the project document.

Required Steps: In the VRC Project Document, project proponents shall report on: 1. a) Results from the indigenous community assessment (Standard 1), b) results of prior consultation with the indigenous community user groups (Standard 2), and c) community level prior consultation (standard 3) and d) community consent response in the final draft Project Document (Standard 4) (conditional or outright consent, or rejection),

Final values of income equalization factor calculations (e.g. user group(s) for livelihood and income equivalent(s) for all affected user groups, and avoided impact costs, 3. Reporting of monitoring activity plan (or to the community's designated leadership) in the local indigenous language (where warranted), 4. Indigenous communities or their designated customary leadership are given updated contact information for the destination of the monitoring report (country office address, phone number, and email) when (or if) it changes for designated VRC Auditor, 5. Indigenous communities or their designated customary leadership shall have the right to contact the VRC project auditor if they believe there are unreported elements that materially (see: definitions, VRC framework) effect the project , 6) Reporting on steps 1-5 above is reported in the project document are transmitted by the project proponent to the VRC auditor.

7.2 Standard 7: Rights and Responsibilities during VRC Project Implementation

Standard 7: Rights & Responsibilities during VRC Project Implementation

Relevant VRC Sections: 4.8 Estimating Avoided Impact Costs, 4.12 Methodology Review and Approval, 4.13 Methodology Revision Process and Approval, 5.2.4.3 Monitoring Report, 6.1.3 Model Flexibility

Objectives:

After community consent for a VRC project is given, one principle objective is to provide on–going community rights to indigenous communities during VRC project implementation regardless of when such rights may be exercised in the 10-year project cycle. A second objective is to provide for conditions under which communities may consult with the project management organization, a third objective is to provide an avenue for indigenous

communities which seek redress from the VRC auditor to prevent damages and losses, and or request notification by the VRC auditor to the project funder, a fifth objective is to ensure methodologies that are approved for VRC projects in indigenous communities perform project activities for all affected user groups, genders & social groups, and cultural roles previously documented in the project document (see: Standard 6: steps 1, 2 & 3) with a focus on two areas: the appropriate on-going project activities in correspondence to effects of climate change impacts in the inhabited biome(s), and the distinct vulnerabilities of the aforementioned affected groups (user groups, social groups, and cultural roles) to ensure reasonable flexibility (defined as in VRC section 6.1.3 Model Flexibility) in the pursuit of VRC project outcomes, and a sixth objective is to inform indigenous communities of their responsibilities under VRC project implementation.

Required Steps: Part I: Responsibilities of VRC Project Administrating Organizations (PAOs)

Indigenous communities that give free and informed consent to VRC projects shall be informed by VRC PAO of their right to consult with the PAO on issues of project implementation when: 1. user groups, genders, vulnerable social groups, and cultural roles (i.e. beneficiaries) are adversely impacted by project activities due to unforeseen circumstances (deaths, community migration, etc.), 2. Beneficiaries are in dispute about assigned benefits, 3. Delivery of scheduled benefits are delayed by more than 45 days, and 4. When outcomes of Prior Consultations, the terms of Community Consent, or outcomes of monitoring reports are not accessible to community members in the local indigenous language (vis a vis interpretation or translation), and 5) Community disunity disallows completion of main VRC project activities over a period of six months or more, 6. the proposed and approved project is not robust enough to reduce community vulnerability due to increased severity and or increased exposure to the impacts of climate change,

Required Steps Part II: Responsibilities of Indigenous Communities

7. Indigenous communities that give free and informed consent to VRC project(s) shall have a right to contact the designated VRC Auditor when they experience a material change in the pre-approved VRC project activities which pose potential damages and losses to their community's social, economic, and or cultural well- being, 8. Indigenous communities that give consent for proposed VRC projects shall have the right to request the VRC Auditor notify Higher Ground Foundation of material changes in the pre-approved project activities which then pose potential damages and losses, and receive written confirmation of that notification from the VRC Auditor, 9. The Indigenous communities or their designated customary leadership shall be responsible for contacting the VRC project auditor if they believe there are unreported elements in the approved monitoring plan that materially (see: definitions, VRC framework) effect the project, 10. Indigenous communities or their designated customary leadership shall be responsible for reporting to the VRC auditor if internal community disunity disallows them to carry out materially significant activities for any period of six months or more of scheduled project activities, 11. Indigenous communities or their shall be responsible for contacting the VRC project auditor if they believe there are unreported elements that materially (see: definitions, VRC framework) effect the VRC project in a negative manner.

7.3 Standard 8: Property Rights and Indigenous Customary Land Use

Standard 8: Property Rights and Indigenous Customary Land Use

Relevant VRC Sections: 5.1.4 Project Location and Physical Boundary, 5.1.5 Right of Use, Ownership and Legal Title/Property Rights

Objectives: One objective is to recognize as customary law or common law, Indigenous communities' rights to customary land uses as per findings of the Human Rights Commission of the Organization of American States, The United Nations Human Rights Council, and some national governments; A second objective is to recognize indigenous customary land uses constitute indigenous access and use of natural resources for material and cultural activities in territory traditionally used for such purposes, A third objective is to recognize that such customary land uses, while not conferring absolute property rights, may delineate legally permitted usage area boundaries, A fourth objective is to recognize, that where national law has legally settled such issues, the de-facto precedent shall prevail, and the fifth objective is that where customary law for indigenous communities or their designated customary leadership is recognized in legal precedent, it is legally permissible for VRC projects. (See Guidance, Standard 7, for a comprehensive look at property rights and indigenous communities).

Required Steps:

1.When an indigenous community's customary land use areas fall within project boundaries, or overlaps with them, indigenous communities retain the legally recognized right to safeguard indigenous communities' customary land uses, 2. When free and informed consent is obtained for projects, the customary usage area boundaries, once documented with geodetic parameters, shall be included in project documents where projects impact on those activities, 3. Project impacts must be presented to the community and the affected indigenous community customary land use group(s) must be consulted, 4. No indigenous customary use area may be considered exclusionary to other parties internal or external to the indigenous community unless legally settled, 5. In such "unsettled" cases, a multiple party consent must be obtained for submission to a VRC auditor. In such cases, Standard 8 shall be followed.

7.4 Standard 9: Multiple Use Areas and Multiple Users

Standard 9: Multiple Use Areas and Multiple Users

Relevant VRC Sections: VRC Section 8.3 Overlapping Boundaries; multiple use areas and multiple users.

Objectives

One objective is to recognize that in indigenous communities, customary land user groups (i.e. pastoralists, fishers, gatherers, hunters, etc.) may overlap with other land user groups of the same indigenous community. A second objective is to recognize that indigenous customary land use groups may overlap with other non-indigenous land use groups as well. A third objective is to recognize that a good faith effort at consultation with all affected land user groups is operationally necessary when crafting agreements for VRC projects.

Required Steps: 1. Project proponents shall determine if indigenous land user group(s) have standing according to international standards (see references Standards section 8.2) and are eligible for VRC projects if they don't conflict with other legal precedents for land uses by national courts, 2. The type, duration, expanse, and beneficiaries of the various activity(ies) of the established indigenous land use group(s) shall be described in the VRC project document, 3. In such cases where multiple users also claim customary uses over corresponding land, if legally settled, then the type, duration, expanse, and beneficiaries of the various land use activity(ies) shall be documented as part of a project multi-party VRC project agreement, 4. In said agreement, potential impacts to unique indigenous land use activities shall be delineated and any compensation due to anticipated damages and losses shall be described in current monetary value, 5. Where multiple parties cannot agree but where there is legal settlement in favor the indigenous community's customary land use, they shall be considered a sole beneficiary to a VRC project agreement in areas of multiple uses, 6. Where non-indigenous property holder has legal title in a settled case, and multiple parties cannot agree on a multiple party use plan, then they shall be the sole beneficiary to a VRC project agreement in areas of multiple uses.

7.5 Standard 10: VRC Ownership for Indigenous Communities

Standard 10: VRC Ownership for Indigenous Communities

Relevant VRC Sections: 5.1.5 Right of Use, Ownership and Legal Title/Property Rights, 4.12 Methodology Review and Approval, 4.13 Methodology Revision Process and Approval.

Objectives

The primary objective is to ensure that indigenous communities maintain a transparent means of VRC ownership or shared ownership. A second objective is to ensure a fairly valued and transparent sale or transfer of VRCs by indigenous community. A third objective is to provide proper documentation of the said VRC sale or transfer to the sale/transfer party, buyer receipt party, and receipt issuing VRC Auditor.

Required Steps: 1. VRC's shall be documented for ownership in indigenous communities as owned wholly and solely by an indigenous community, or owned partially by currently valued VRCs upon issuance by the Higher Ground Foundation by indigenous communities in association with project proponent organizations (typically NGOs or INGOs, but not limited to them) or financial institutions, 2. In cases of partial ownership; VRC's shall be accredited proportionately to indigenous communities on a percentage basis, 3. Any percentage of a project's VRC's owned by an indigenous community may be transferred (via sale, lease, trade, or gifting) at fair market value under two conditions: a) the community identified prior to the transfer beneficiaries who shall receive the transferred VRC's; e.g. whether benefits accrue to the whole community, to designated customary land user group(s), or other community or non-community person(s) or organization; and b) the transfer via sale, trade, lease, or gifting of VRC credits, was consented to prior to transfer by the whole indigenous community and not just the designated customary leadership of the indigenous community, 4. Any sale or transfer of VRCs' must be in accordance with VRC Section 5.1.5 Right of Use, Ownership and Legal Title/Property Rights, 5. The transaction and authorized signatures of the sale or transfer party and the buyer or recipient party must be documented and reported to the VRC auditor, and 6, the VRC Auditor must issue acknowledgement and approval of the transfer via a sales or transfer receipt to both the sale/transfer party, and the buyer/receipt party within 30 days.

8 Annex C: Standards for Calculating VRC Project GHG Emissions

For guidance and factors to calculate emissions, see:

https://cdm.unfccc.int/methodologies/index.html

http://www.ipcc-nggip.iges.or.jp/EFDB/main.php

8.1 List of project types not requiring emission calculation

8.2 List of approved sources of emission offset credits

9 Annex D: Methodology Approval Guidelines

This annex shall outline the methodology approval requirements. It shall include the basic requirements, and as appropriate and applicable include different approval requirements for small scale projects.

The Higher Ground Foundation will develop these Guidelines during the "learning by doing" pilot execution phase, to be finalized prior to the full execution phase.

9.1 List of approved standard methodologies

9.2 List of approved small-scale methodologies

10 Annex E: Project Validation and Verification Guidelines

11 Annex F: Auditor Accreditation Requirements

12 Annex G: Approvals Price Schedule

13 Annex H: Inter-Project Pool for Project Reversals

14 Annex I: VRC Methodology Template

14.1 Methodology Template Title Page

METHODOLOGY TITLE

Title	Name of the methodology or methodology revision
Version	Version number of this document
Date of Issue	DD-Month-YYYY this version of the document issued
Type	Methodology or methodology revision
Sectoral Scope	Sectoral scope(s) applicable to the methodology/revision
Prepared By	Individual or entity that prepared the document
Contact	Physical address, telephone, email, website

Note for methodology preparer: text in italics is for clarification and shall be removed prior to submission.

14.2 Table of Contents

14.3 Summary Description of the Methodology

Provide a brief summary description of the methodology, including a description of the project activity(s) to which the methodology applies.

14.4 Definitions

Using the format in the example below, provide, in alphabetical order, definitions of key terms and acronyms that are used in the methodology. Ensure all defined terms are used in the methodology. Do not include terms already defined under the VRC Standard Framework. Below is an example definition in the required format. References at the end of a definition for further detail are optional.

Breakwater: A hard engineering structure built in the sea which, by breaking waves, protects a harbour, anchorage, beach or shore area. A breakwater can be attached to the coast or lie offshore.

14.5 Sectoral Scope and Applicability Conditions

Describe the project activity(s) to which the methodology applies. Then, set out specific applicability criteria that define project eligibility, such as sectoral scope, geographic location, technology type, historical land use, and any other conditions under which the methodology is applicable.

The following should be borne in mind when writing the applicability conditions:

- Applicability conditions must be specified clearly, and in a manner that allows easy determination of whether an activity being undertaken by a potential project proponent is eligible.
- Applicability conditions must not contain procedures or obligations upon the project proponent. Rather, they must be conditions against which project eligibility can be determined at the time of validation and must not require the project proponent to undertake ongoing actions to ensure continued eligibility.
- The list of applicability conditions may contain exclusions (ie, may describe types of project activities to which the methodology does not apply).

This methodology applies to project activities under the following sectoral scopes (as delineated in VRC Standard Framework Section 2.2):

This methodology is applicable under the following conditions:

- <Condition>
- <Condition>
- …

This methodology is not applicable under the following conditions:

- <Condition>
- <Condition>
- …

14.6 Project Boundary and Applicable Impact Cost Factors

Describe the approach to defining the project boundary and identify the possible impact cost factors (controlled by the project proponent, related to the project or affected by the project) included in or excluded from the project boundary. Specify where impact cost factors are optional. Include any procedures and/or diagrams, as appropriate.

Provide particular guidance for the project sector/project type required to comply with Section 7.4, Multiple Use Areas and Multiple Users applicable for where indigenous communities are present.

Provide specific guidance for identifying project type/sectoral impact cost factors applicable for indigenous communities, following the Standards for Indigenous Communities Consultation in Section 7 of the VRC Standard Framework.

The spatial extent of the project boundary encompasses…(input here)

Social boundary as defined by the community impacted (including any dispersed populations that may not be within the physical boundary) includes …(input here)

Outline in Table 2 below the possible climate-related impact cost factors included in or excluded from the project boundary are shown in Table 2 below.

Table 2: Impact Cost Factors Included or Excluded from the Project Boundary

Climate Impact Cost Factors

Included in Boundary?

Justification, and if the impact cost factor is required or optional

Baseline

Impact Cost Factor 1

Impact Cost Factor 2

(add factors as required)

Project

Impact Cost Factor 1

Impact Cost Factor 2

(add factors as required)

14.7 Additionality

Describe the criteria and procedures for the demonstration and assessment of additionality.

The methodology may apply either a project based activity assessment approach using a process of tests, or a standardized method using either benchmarks or positive lists.

In addition to submitting details below in this section, please see and address appendices I and II below.

Further details on approaches to establishing additionality are available in the VRC Standard Framework, Section 4.10 Additionality.

Until further notice, the project proponent may apply the latest version of the UNFCCC's "tool for the demonstration of additionality" used for Clean Development Mechanism projects, found at : https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-01-v7.0.0.pdf

Until further notice, the project proponent may apply the latest version of the UNFCCC's "Guidelines for the establishment of sector specific standardized baselines" at: https://cdm.unfccc.int/Reference/Guidclarif/meth/meth_guid42.pdf

For Project Test Additionality Assessments:

Describe how the assessment is undertaken to:

(a) Demonstrate whether the proposed project activity is the first-of-its-kind for this region, sector, or applicable social or physical environment;

(b) Identify plausible alternative(s) to the project activity;

(c) Performs investment analysis to determine that the proposed project activity is either: 1) not the most economically or financially attractive, or 2) not economically or financially feasible;

(d) Establish a barriers analysis; and

(e) Undertake a common practice analysis.

For Performance Benchmark Additionality Approaches:

For methodologies applying a Performance Based Approach for additionally, specify the level of the performance benchmark metric that will serve as the threshold for additionality. Describe the data, analysis and process used to establish the benchmark.

For methodologies applying a Positive List Approach, outline why a particular activity shall be included in such a list, via one of three alternative approaches:

1. Activity penetration: <= 5% adoption level of project activity (relative to maximum adoption potential)

2. Financial viability: Less financially or economically attractive than alternatives (demonstrated using CDM additionality tool) or,
3. Revenue streams: No other significant sources of revenue (gross annual revenue excluding from sale of VRC certificates not to exceed 5% of capital expenditure).

14.8 Income Equalisation Factor (IEF)

VRC methodologies shall outline the standardized procedure for identifying the IEF. The below table shall be included and if there are reasons why a particular methodology employs a non-standardised approach this must be justified, along with when and/or where this is applicable.

Projects must establish with confidence the current or recent past (within two year) per capita income of all people living within the project boundary.

If a project is in an indigenous community, as defined in Framework Terminology, then it shall use the guidelines as developed in the Framework Annex, Standards for Indigenous Communities Consultation, to incorporate their income into financial baselines via appropriate methodology (e.g., pro-rating of seasonal or falsely annualised incomes).

The World Bank's most recent Gross National Income (GNI) threshold for lower to upper middle-income nations (see http://data.worldbank.org/about/country-classifications for current threshold) shall be divided by the per capita income calculation for the population within the project boundary to determine the Income Equalization Factor.

Describe the methodology to determine the IEF, including the sources of data, sampling required, and how the data meets the upper bound of a 90% confidence interval.

Table 3: Income Equalisation Factor Calculation

Income Equalisation Factor Calculation

Source of Data

Outline any permissible data options that may be particular to the communities impacted

Data Gathering Methodology, Sampling Size (if applicable)

Outline the approach to gather data particular to communities impacted

Years of Applicable Data

GNI Threshold Year

GNI Threshold (U.S. Dollars)

Per Capita Income (Local Currency)

Exchange Rate to U.S. Dollars, Date

Income Equalisation Factor

14.9 Impact Cost Calculations

Describe the criteria and procedures, including relevant equations, for the quantification of impact costs for the (1) baseline (taking into account climate change), (2) project (not taking into account climate change), and (3) project (that takes into account climate change).

Ensure equations are provided to cover all identified impacts related to the impact cost factors set out in the Section 4 (Project Boundary) above, including factors that the project proponent may optionally include. Include summary information to describe the context of equations, and use an appendix for any lengthier explanations.

Ensure that parameters and variables are consistently applied throughout the equations in the methodology. Include equations for calculating uncertainty.

Provide specific guidance for impact cost calculations applicable for indigenous communities, following the Standards for Indigenous Communities Consultation in Section 7 of the VRC Standard Framework.

Impact Cost Calculation: General Equations:

List here the general equation(s) to estimate impact costs for the three scenarios listed above. Include equations for calculating uncertainty.

Baseline Impact Costs (taking into account climate change)

List here the specific calculations, with applicable data, to estimate impact costs for the baseline. Include uncertainty analysis calculations.

Project Impact Costs (not taking into account climate change)

Describe the criteria and procedures, including relevant equations, for the quantification of Impact Costs for the selected projected loss and/or damage levels for the project, under the assumption that there is no climate change. Follow the instructions for equations provided in Section 8 above. Include equations for calculating uncertainty.

1.3 Project Impact Costs (taking into account climate change)

Describe the criteria and procedures, including relevant equations, for the quantification of Impact Costs for the selected projected loss and/or damage levels for the project, taking into account climate change. Follow the instructions for equations provided in Section 8 above. Include equations for calculating uncertainty.

Creditable Avoided Impact Costs

Describe the criteria and procedures, including relevant equations, for the quantification of Impact

Costs for the difference between project impact costs taking into account climate change and not taking into account climate change.

Leakage

Describe the criteria and procedures, including relevant equations, for the quantification of impact cost leakage for the selected. Follow the instructions for equations provided in Section 8.1 (Baseline Emissions) above. Include equations for calculating uncertainty.

Based on the Standard Framework section on quantifying project related greenhouse gas emissions and the forthcoming tool related to this, the methodology shall include an approach to quantify baseline and project emissions, and calculate emissions estimate uncertainty levels. Project related emissions do not count in the impact cost calculation.

Project Related Greenhouse Gas Emissions

Describe the approach taken to establish project greenhouse gas emissions, or justify how the project type is exempt from such a calculation and why The Higher Ground Foundation should consider it for inclusion in the applicable positive list of project types, 8.1 List of project types not requiring emission calculation.

Until further notice, guidance for calculating emissions and emissions factors shall employ relevant third-party documents as noted in 8 Annex: Standards for Calculating VRC Project GHG Emissions.

Net VRC Calculation

Net vulnerability reduction credits are calculated as follows:

$$?VRC = (CAIC - ICL)IEF$$

Where:

CAIC = Creditable Avoided Impact Costs

ICL = Impact Cost Leakage

IEF = Income Equalisation Factor

14.10 Avoidance of Catastrophic Harm

Methodologies shall define potential faults or conditions under which failure of project infrastructure, operations or methodology would lead to sudden loss of life and demonstrate that measures have been taken to reasonably eliminate the possibility of such occurrences. Where catastrophic occurrences can be actuarially forecast, project developers must demonstrate that the cumulative probability of occurrence increasing owing to the project measures, is lower than one percent within 50 years of project start. Examples of potentially catastrophic consequences include:

- Significant threats to endangered species or unique ecosystems
- Irretrievable damage or destruction to historically or culturally significant property
- Significant threat to lifestyles or wellbeing of native communities
- Risk of destruction/loss of life of entire households and communities

14.11 Compliance with Relevant Laws

Note any particular project type or sectoral issues that may be regulated under government laws or regulations and indicate how the project proponent may establish that it has identified these and may demonstrate its compliance.

14.12 Local Stakeholder Consultation

Based on circumstances and impacts that would commonly be found for the applicable sector and project type, outline the specific community rights, including the process for identifying potential negative impacts, and in cases where elements of a community (inside or outside the project boundary) are negatively impacted, outline the acceptable measures that may be taken to redress or compensate impacted parties.

Interpret in methodology how particular project scope/project type can apply VRC Standard Framework Section 7, Standards for Indigenous Communities Consultation.

14.13 Environmental and Social Impacts

Outline the sector and project relevant approach to identify and assess potential environmental and social impacts, and the threshold requirements for undertaking an environmental and/or social impact assessment.

14.14 Monitoring Plan

Data and Parameters Available at Validation

Complete the table below for all data and parameters that will be determined or available at validation, and remain fixed throughout the project crediting period (copy the table for each data/parameter). Data and parameters monitored during the operation of the project are included in Section 13.2 (Data and Parameters Monitored) below.

Ensure that data sources are appropriate and comply with Higher Ground rules and requirements. Likewise, ensure that rules and requirements for models and default factors are adhered to (and also found in Section 13.2 (Data and Parameters Monitored.)

Ensure that all data and parameters used in the equations for quantification of human climate vulnerability in the methodology are included in this section (Data and Parameters Available at Validation) or the following section (Data and Parameters Monitored).

Where the methodology establishes default factors which may become out of date (ie, default factors that do not represent physical constants or otherwise would be expected to change significantly over time), make note of same in the Comments field. State the allowable age of data sets for applicability.

Data / Parameter	
Data unit	Indicate the unit of measure
Description	Provide a brief description of the data/parameter
Equations and derived values from models	List the equation(s) and any derived values that use this data/ parameter
Source of data	Indicate the source(s) of data.
Date of data set	Day/Month/Year – Day/Month/Year; stipulate for each different data set
Value applied	Provide the value applied, if any
Justification of choice of data or description of measurement methods and procedures applied	Justify the choice of data source, providing references where applicable. Where values will be based on measurement, include a description of the appropriate measurement methods and procedures that must be applied (eg, what standards or protocols must be followed). Where the data/parameter value is established in the methodology (eg, a default factor established from primary sources) provide justification for the method used, using an appendix where necessary.
Purpose of Data	Indicate one of the following: • Determination of baseline scenario • Calculation of baseline emissions • Calculation of project emissions • Calculation of leakage
Comments	Provide any additional comments

Example:

Data / Parameter:	Maximum daily temperature
Data unit	° C/day
Description	The maximum temperature as modeled in degrees centigrade
Equations and derived values from models	No equation applicable, values derived from complex general circulation models (name) and downscaling tool (name).
Source of data	Use model outputs from downscaled climate model run performed by local university using the CLIMEXAMPLE model, operating off of the MIDCASEEXAMPLE emissions scenario.
Value applied	N/A
Justification of choice of data or description of measurement methods and procedures applied	Detailed discussion of how the data is the most robust, reliable, and available in most cases, and how the measurement procedure is the most accurate for a low cost process that is available throughout the world.
Purpose of Data	Used as input into soil moisture content estimates for drought impact assessment
Comments	Discussion here of how in some cases a deviation is justified for various reasons, outlining alternative data and measurement approaches that the methodology would consider appropriate if duly justified in a request for methodology deviation.

Data and Parameters Monitored

Complete the table below for all data and parameters that will be monitored during the project crediting period (copy the table as necessary for each data/parameter). Data and parameters determined or available at validation are included in Section 13.1 (Data and Parameters Available at Validation) above.

Ensure that data sources are appropriate and comply with Higher Ground rules and requirements. Likewise, ensure that rules and requirements for models and default factors are adhered to, (and see Section 13.1 (Data and Parameters Available at Validation) above).

Parameters that are not directly monitored themselves (ie, are calculated, using monitored data/parameters and the equations provided in the methodology) do not need to be included in this section.

Data / Parameter:	
Data unit:	Indicate the unit of measure
Description:	Provide a brief description of the data/parameter
Equations	List the equation(s) that use this data/parameter
Source of data:	Indicate the source(s) of data
Description of measurement methods and procedures to be applied:	Specify the appropriate measurement methods and procedures and any standards or protocols that must be followed. Include any relevant information regarding the accuracy of the measurements (eg, accuracy associated with meter equipment or laboratory tests).
Frequency of monitoring/ recording:	Specify measurement and recording frequency
QA/QC procedures to be applied:	Describe the quality assurance and quality control (QA/QC) procedures to be applied, including the calibration procedures where applicable
Purpose of data:	Indicate one of the following: • Calculation of baseline emissions • Calculation of project emissions • Calculation of leakage
Calculation method:	Provide any calculation method, including any equations, used to establish the data/parameter.
Comments:	Provide any additional comments

Example:

Data / Parameter	Soil moisture content
Data unit	M^3M^{-3}
Description	Ratio of volume of water to volume of soil
Equations	1
Source of data	Measurements at project sites
Description of measurement methods and procedures to be applied	Use calibrated soil water sensors. Calibration must be conducted according to the equipment manufacturer's specifications.
Frequency of monitoring/recording	Data must be monitored and recorded on at least a weekly basis.
QA/QC procedures to be applied	The consistency of measurements should be cross-checked with rainfall data and a general correlation established
Purpose of data	Calculation of project vulnerability reduction measures from trench cum bunds and irrigation
Comments	N/A

Description of the Monitoring Plan

Describe the criteria and procedures for obtaining, recording, compiling and analyzing monitored the data and parameters set out in Section 13.2 above.

Provide appropriate guidance for developing Terms of Reference for recording and reporting monitored project activities to Indigenous community and to VRC project auditor.

14.15 References

Include any references relevant to the methodology.

14.16 Methodology Template Appendix I: Establishing Standardized approach for Additionality: Performance Method

Where the methodology applies a performance method for determining additionality and/or the crediting baseline, complete the sections below. For all other methodologies, delete this appendix.

The purpose of this appendix is to provide background information on the performance method, to provide transparency with respect to the rigor and appropriateness of the performance method. The main body of the methodology should be kept clear of such background information. The sections below provide instructions on the information required, though the instructions are not exhaustive. Additional information must be added where required by Higher Ground rules, and should be added where this would help to establish the rigor and appropriateness of the performance method.

Applicability Conditions

Provide information with respect to how the applicability conditions ensure the following:

- The methodology, to the extent practicable, excludes those classes of project activities that it can be reasonably assumed will be implemented without the intervention created by the carbon market.
- Projects implement technologies and/or measures that cause substantial performance improvement relative to the crediting baseline and what is achievable within the sector.
- The methodology or performance benchmark is only applicable to the geographic area for which data are available, or that data from one geographic area are representative of another or that it is conservative to apply data from one geographic area to another.

Baseline Scenario

Provide the following information with respect to the baseline scenario:

- Provide a description and analysis of the current distribution of performance within the group of emitters to which the methodology and performance benchmark is applicable, including current trends in performance.
- Describe the alternative baseline scenarios that were identified and the process followed to determine the most plausible baseline scenario or an aggregate baseline scenario for the project activity.

Performance Benchmark

Provide the following information with respect to the performance benchmark:

- Provide a discussion and evaluation of the tradeoff between false negatives and false positives in selecting the level of the performance benchmark metric. Describe objectively and transparently the evidence used, experts consulted, assumptions made, and analysis (including numerical analysis) and process undertaken in determining the selected level of the performance benchmark metric. Include a summary of the expert consultation process noting that the full expert consultation report must be attached as a separate document or provided in an appendix.
- Where proxy metrics or conditions for the performance benchmark metric are used, demonstrate that they are strongly correlated with the performance benchmark metric and that they can serve as an equivalent or better method (e.g., in terms of reliability, consistency or practicality) to determine whether performance is achieved to a level at least equivalent to that of the performance benchmark metric.

- Explain and justify the appropriateness of data sources used to establish the performance benchmark metric.

14.17 Methodology Template Appendix II: Establishing Additionality: Activity Method, for inclusion in positive list

Where the methodology applies an activity method for determining additionality, complete the sections below. For all other methodologies, delete this appendix.

The purpose of this appendix is to provide background information on the activity method, to provide transparency with respect to the rigor and appropriateness of the activity method. The main body of the methodology should be kept clear of such background information. The sections below provide instructions on the information required, though the instructions are not exhaustive. Additional information must be added where required by the Higher Ground rules and should be added where this would help to establish the rigor and appropriateness of the activity method.

Applicability Conditions

Provide information with respect to how the applicability conditions ensure the following:

- The methodology, to the extent practicable, excludes those classes of project activities that it can be reasonably assumed will be implemented without the intervention created by the vulnerability reduction credit market.
- There is similarity across the sub-areas of the geographic scope (to which the methodology is applicable) in factors such as socio-economic conditions, climatic conditions, land use, raw material availability, agricultural practices, disaster risk reduction measures, and other factors, as such factors relate to the baseline scenario and additionality.

Baseline Scenario

Provide the following information with respect to the baseline scenario:

- Provide a description and analysis of the current distribution of performance within the group of emitters to which the methodology is applicable, including current trends in performance.
- Describe the alternative baseline scenarios that were identified and the process followed to determine the most plausible baseline scenario or an aggregate baseline scenario for the project activity.

Positive List

Provide the following information with respect to the positive list:

- Identify the option selected for establishing the positive list

1. Activity penetration: <= 5% adoption level of project activity (relative to maximum adoption potential)
2. Financial viability: Less financially or economically attractive than alternatives (demonstrated using CDM additionality tool) or,
3. Revenue streams: No other significant sources of revenue (gross annual revenue excluding from sale of VRC certificates not to exceed 5% of capital expenditure).

- Provide a detailed description to demonstrate how each of the steps and associated requirements for the selected option have been addressed.
- Explain and justify the appropriateness of data sources used to establish the positive list.

15 Annex J: VRC Project Document Template

15.1 VRC Project Document Title Page

Project TITLE

Project Title	Name of project
Version	Version number of this document
Community Type	Constitutes or includes an Indigenous Community, or Mixed Indigenous and Non-Indigenous Communities
Date of Issue	DD-Month-YYYY this version of the document issued
Project Proponent	Entity responsible for project
Prepared By	Individual or entity that prepared this document
Preparer Contact	Physical address, telephone, email, website

Note for project document preparer: text in italics is for clarification and shall be removed prior to submission. This project document template is applicable for both initial project registration, and for activity period renewals. All information and sections must be completed for both initial registration and renewal unless otherwise noted.

15.2 VRC Project Document Table of Contents

Table of Contents

15.3 Project Basics

Summary Description of the Project

Provide a summary description of the project to enable an understanding of the nature of the project and its implementation, including the following (no more than one page):

- A summary description of the methodology or methodologies applied.
- The geographic location of the project, and locales as defined in the VRC Standard Framework.
- An explanation of how the project is expected to generate Vulnerability Reduction Credits (VRCs).
- A brief description of the baseline scenario existing prior to the implementation of the project.
- An estimate of total project lifetime, activity periods (if applicable) and total VRCs generated over the first activity period.
- If the project boundary contains an indigenous community, note this.

Sectoral Scope, Project Type, Community Type

- Indicate the sectoral scope(s) applicable to the project (see VRC Framework Section 2.2 Applicable Sectors).
- Describe the project intervention: what technologies are deployed and practices undertaken, and how these technologies and practices are intended to reduce impact costs.
- Indicate if the project involves indigenous communities. If yes, characterise the community(ies) including their commonly held name(s). [See VRC Standard Framework,

7.1.1 Standard 1: Assessment of Indigenous Communities for guidance. If "yes," note that the project document must meet additional and alternative requirements as noted throughout the PD Template.]

Methodology(ies) Applied and Deviations (if applicable)

Provide the title and version number of the VRC Methodology or Methodologies employed for the project, and if a methodology is new and will be supplied in conjunction with this project document. Include also the title and version number of any tools applied by the project.

- Demonstrate and justify how the project activity(s) meets each of the applicability conditions of the methodology(s), and tools (where applicable) applied by the project. Address each applicability condition separately.
- Describe and justify any methodology deviations. Include evidence to demonstrate the following:
- The deviation will not negatively impact the conservativeness of the quantification of VRCs.
- The deviation relates only to the criteria and procedures for monitoring or measurement, and does not relate to any other part of the methodology.

Project Proponent Details

Provide contact information for the project proponent(s). Copy and paste the table as needed.

Organization name

Contact person

Title

Address

Telephone

Email

Provide contact information and roles/responsibilities for any other entities involved in the development of the project. Copy and paste the table as needed.

Organization name

Role in the project

Contact person

Title

Address

Telephone

Email

15.4 Project Details

Project Description

Describe the project activity or activities (including the technologies or measures employed) and how it/they will result in reduced vulnerability to climate change.

- Include a list and the arrangement of the main manufacturing/production technologies, systems and equipment involved. Include in the description information about the age and average lifetime of the equipment based on manufacturer's specifications and industry standards, and existing and forecast installed capacities, load factors and efficiencies.
- Include the types and levels of services provided by the systems and equipment that are being modified and/or installed and their relation, if any, to other manufacturing/ production equipment and systems outside the project boundary. Clearly explain how the same types and levels of services provided by the project would have been provided in the baseline scenario.
- For all measures listed, include information on any conservation, management or planting activities, including a description of how the various organizations, communities and other entities are involved.
- Where appropriate, provide a list of facilities, systems and equipment in operation under the existing scenario prior to the implementation of the project.

Baseline Scenario Description

Identify and justify the baseline scenario, in accordance with the procedure set out in the applied methodology and any relevant tools. Where the procedure in the applied methodology involves several steps, describe how each step is applied and clearly document the outcome of each step.

Explain and justify key assumptions, rationale and methodological choices. Provide all relevant references.

Conditions Prior to Project Initiation

Where the baseline scenario is the same as the conditions existing prior to the project initiation, there is no need to repeat the description of the scenarios (rather, just state that this is the case and refer the reader to the Baseline Scenario section of the project document.

Include the present and prior environmental conditions of the project area, including as appropriate information on the climate, hydrology, topography, relevant historic conditions, soils, vegetation and ecosystems.

Project Start Date

Indicate, and provide justification for, the anticipated project start date, specifying the day, month and year. Justification must describe why the project is avoiding expected impact costs from the identified date, and why it expects to start on this date.

Project Activity Period(s) Anticipated and Baseline Trends

- Indicate the total expected project activity lifetime, specifying the day, month and year for the start and end dates and the total number of years. Justify referencing industry standards for equipment life, etc. Estimate total number of project activity periods and respective lengths in years.
- Discuss how trends in baseline within and outside project boundary may impact future project period baselines, including the economic equalisation factor. Justify with references why shifts in economic development, technologies, practices and climate may result in anticipated changes in baselines. While not required, an indicative schedule of future baselines anticipated may illustrate shifts.
- If this project document is for an activity period renewal, please stipulate this, noting the number (e.g. 1st activity period), the day, month and year for the start and end dates and the total number of years.

Project Boundary

- Indicate the project location and geographic boundaries (if applicable) including a set of geodetic coordinates. For grouped projects, coordinates may be submitted separately as a KML file. Include in the diagram or map the locations of where the various measures are taking place, any reference areas and leakage belts.
- Describe the social boundary as defined by the community impacted (including any dispersed populations that may not be within the physical boundary).
- Include a statement that the project boundary was determined in consultation with the community, describing the outcomes and any changes to boundary based on this consultation.
- Where indigenous communities are present, follow applicable methodology guidance for the project sector/project type required to comply with Section 7.4, Multiple Use Areas and Multiple Users applicable for where indigenous communities are present.

Applicable Impact Cost Factors

Based on the possible impact cost factors highlighted in the applicable methodology, identify the climate impact cost factors for the project and baseline scenarios (including leakage if applicable). Justify inclusion or exclusion of possible impact cost factors indicated in the applicable methodology and note if impact cost factors for the baseline and project are different and why.

Where indigenous communities are present, follow applicable methodology guidance for the project sector/project type required to comply with the Standards for Indigenous Communities Consultation in Section 7 of the VRC Standard Framework.

Impact Cost Factors

Included?

(Y/N)

Justification/Explanation of Inclusion/Exclusion

Baseline

Impact Cost Factor A

Impact Cost Factor X (continue as required)

Project

Impact Cost Factor A

Impact Cost Factor X (continue as required)

15.5 Additionality

Demonstrate and assess the additionality of the project, in accordance with the applied methodology and any relevant tools, taking into account of the following:

- Where a project method is applied to demonstrate additionality and the procedure in the applied methodology or tool involves several steps, describe how each step is applied and clearly document the outcome of each step. Indicate clearly the method selected to demonstrate additionality. Where barrier analysis, or equivalent, is used to demonstrate

additionality, only include the most relevant barriers. Justify the credibility of the barriers with key facts and/or assumptions and the rationale. Provide all relevant references.

- Where a performance method is applied to demonstrate additionality, demonstrate that performance can be achieved to a level at least equivalent to the performance benchmark metric.
- Where the methodology applies an activity method for the demonstration of additionality, use this section to demonstrate regulatory surplus (only) and include a statement that notes that conformance with the positive list is demonstrated in the Applicability of Methodology section above.

Provide sufficient information (including all relevant data and parameters, with sources) so that a reader can reproduce the additionality analysis and obtain the same results.

15.6 Income Equalisation Factor (IEF)

Following the applicable methodology, indicate the estimated Income Equalisation Factor (IEF) to apply for the upcoming applicable project activity period. Describe the approach to estimating the IEF based on an applicable approved methodology. Provide data, calculations, steps taken to ensure that the data is accurate, and uncertainty estimations per the applicable methodology.

Note anticipated changes in community income over the upcoming applicable project period, based on calculated trends or referenced forecasts.

Note if the project involves indigenous communities, follow the approach in the applicable methodology and in the VRC Standard Framework Annex, Standards for Indigenous Communities Consultation, to incorporate their income into financial baselines via appropriate methodology.

Income Equalisation Factor Calculation

Source of Data

Data Gathering Methodology, Sampling Size (if applicable)

Years of Applicable Data

GNI Threshold Year

GNI Threshold (U.S. Dollars)

Per Capita Income (Local Currency)

Exchange Rate to U.S. Dollars, Date

Income Equalisation Factor

15.7 Impact Cost Calculations

For data and parameters monitored, use estimates following approaches and data source types delineated in the applicable methodology. Document how each equation is applied, in a manner that enables the reader to reproduce the calculation. Provide example calculations for all key equations, to allow the reader to reproduce the calculation of estimated net VRCs generated.

Follow applicable methodology guidance for impact cost calculations for indigenous communities, following the Standards for Indigenous Communities Consultation in Section 7 of the VRC Standard Framework.

Baseline Impact Costs (taking into account climate change)

Quantify the upcoming applicable activity period's baseline impact costs in accordance with the applied methodology.

Impact Costs: Baseline

Factor

Cost in Local Currency

Cost in Euros (€) (F(x) rate = X)

Impact Cost Factor A

Impact Cost Factor X (continue as required)

Total Impact Cost

Project Scenario Impact Costs (not taking into account climate change)

Quantify the upcoming applicable activity period's project impact costs, not taking into account climate change, in accordance with the applied methodology.

Impact Costs: Project Scenario (Without Climate Change)

Factor

Cost in Local Currency

Cost in Euros (€) (F(x) rate = X)

Impact Cost Factor A

Impact Cost Factor X (continue as required)

Total Impact Cost

Project Scenario Impact Costs (taking into account climate change)

Quantify the upcoming applicable activity period's project impact costs, taking into account climate change, in accordance with the applied methodology.

Impact Costs: Project Scenario (With Climate Change)

Factor

Cost in Local Currency

Cost in Euros (€) (F(x) rate = X)

Impact Cost Factor A

Impact Cost Factor X (continue as required)

Total Impact Cost

Project's Creditable Avoided Impact Costs

Quantify the upcoming applicable activity period's creditable project impact costs in accordance with the applied methodology.

Creditable Avoided Impact Costs

Factor

Cost in Local Currency

Cost in Euros (€) (F(x) rate = X)

Impact Cost Factor A

Impact Cost Factor X (continue as required)

Total Impact Cost

Leakage

Quantify the upcoming applicable activity period's quantifiable impact costs resulting from project leakage, in accordance with the applied methodology.

Project Impact Costs of Leakage

Factor

Cost in Local Currency

Cost in Euros (€) (F(x) rate = X)

Impact Cost Factor A

Impact Cost Factor X (continue as required)

Total Impact Cost

Estimated Net VRC Generation

Indicate the estimated annual VRCs generated for the upcoming applicable project activity period, integrating the creditable avoided impact costs from Section 5.4 and the IEF from Section 4. Include a table in the annex that includes all figures from 5.1 – 5.6.

Project VRC Generation Estimate

Year

Creditable Avoided Impact Costs

Leakage Impact Costs

Net Creditable Impact Costs

IEF

Estimated VRCs

Year 1 (yr./mo./day – yr./mo./day)

Year 2

Year 3

Year...

Activity Period Total

15.8 Avoidance of Catastrophic Harm

Based on the applicable methodology, identify the potential faults or conditions under which failure of project infrastructure, operations or methodology would lead to sudden loss of life and demonstrate that measures have been taken to reasonably eliminate the possibility of such occurrences. Where catastrophic occurrences can be actuarially forecast, project developers must demonstrate that the cumulative probability of occurrence increasing owing to the project measures, is lower than one percent within 50 years of project start. Examples of potentially catastrophic consequences include:

- Significant threats to endangered species or unique ecosystems
- Irretrievable damage or destruction to historically or culturally significant property
- Significant threat to lifestyles or wellbeing of communities
- Risk of destruction/loss of life of entire households or communities

15.9 Compliance with Laws, Statutes and Other Regulatory Frameworks

Following guidance in the applicable methodology, identify and demonstrate compliance of the project with all and any relevant local, regional and national laws, statutes and regulatory frameworks.

For projects with indigenous communities, note compliance with applicable international standards, treaties, and laws as identified in VRC Standard Framework Section 7.1 Principles, Terms of Use and Legal Status References.

15.10 Ownership and Other Programs

Right of Use and Property Rights

Provide evidence of right of use, in accordance with the guidance for “ownership and legal title/property rights” in the VRC Standard Framework.

For projects with indigenous communities, note compliance with VRC Standard Framework Sections 7.1.8 Property Rights and Customary Land Use, 7.1.9 Multiple Use Areas and Multiple Users, and 7.1.10 VRC Ownership for Indigenous Communities.

Other Forms of Environmental and Resource Credit

Indicate whether the project has sought or received another form of environmental credit, including greenhouse gas reduction credits, renewable energy certificates, water benefits credits, wetland credits, etc. Include all relevant information about credit and the related program

15.11 Environmental and Social Impacts

Summarize any environmental and social impact assessments carried out with respect to the project, where applicable.

Based on the applicable methodology, determine and justify the need for completion of an environmental and/or social impact assessment. If an environmental and/or social impact assessment is required, attach the assessment to the project document as an annex.

Quantification of Project Net Greenhouse Gas Emissions

If not on Section 8.1 List of project types not requiring emission calculation, and based on the Standard Framework Section 4.3.1 on quantifying project related greenhouse gas emissions and offsetting requirements, the forthcoming Annex 8: Standards for Calculating VRC Project GHG Emissions, and the applicable methodology, quantify baseline, project and net emissions for the first project activity period.

Year	Baseline Emissions ($MTCO_2e$)	Project Emissions ($MTCO_2e$)	Net Emissions ($MTCO_2e$)
Year A			
Year B			
Year C			
Year...			
Total			

15.12 Local Stakeholder Consultation

- If the project involves indigenous communities, as defined in VRC Standard Framework's Section 7: Standards for Indigenous Communities Consultation, then refer to VRC Guidance for Indigenous Community Consultation and follow reference guidance; following sections 7.1.2, 7.1.3, 7.1.4, 7.1.5, and 7.1.6.

- In particular:
  - State findings from indigenous community assessment of human capital: language, user groups, and social or cultural groups in need of adaptation
  - State findings from indigenous community assessment of physical capitals: CC impacts, cultural sites and landscape in need of adaptation

  - Complete consultations to address livelihood activities identified user groups, social or cultural groups (from the assessment) whose assets or income in the form of stock or flow are affected by proposed VRC project activities

- Based on the applicable methodology, outline the specific community rights, including the process for identifying potential negative impacts, and in cases where elements of a community (inside or outside the project boundary) are negatively impacted, outline the acceptable measures that may be taken to redress or compensate impacted parties.
- Include a statement that the project boundary was determined in consultation with the community, describing the outcomes and any changes to boundary based on this consultation.
- Impact cost factors identified in the methodology shall be described and used during community consultation. Describe the community feedback regarding these factors, including their applicability, and potential for reliable measurement and monitoring.

Stakeholder Comments and Communication Mechanisms

- Summarize relevant outcomes from any stakeholder consultations.
- Describe all mechanisms for on-going communication with local stakeholders.

If the project involves indigenous communities, as defined in VRC Standard Framework's Section 7: Standards for Indigenous Communities Consultation, then describe process, comments, and communications in order to comply with VRC Guidance for Indigenous Community Consultation and follow reference guidance; following sections 7.1.2, 7.1.3, 7.1.4, 7.15, and 7.16

15.13 Additional Information Relevant to the Project

Leakage Management

Where applicable, describe the leakage management plan and implementation of leakage and risk mitigation measures.

Greenhouse Gas Management

Where applicable, describe the approach to offset project related emissions and their quantities.

Permanence (for project activity period renewals)

If the project document is for a project crediting period renewal, provide justification that the project continues to meet the following standards for physical integrity, appropriateness of activities, and appropriate calibration of VRC generation against climatic and other baselines. Specifically:

1. Physical infrastructure integrity – project physical capital, facilities, and infrastructure must maintain integrity and function in a manner sufficient to produce expected VRC flows over the course of the project. Unavoidable physical degradation or depreciation would be expected to reduce VRC generation during the course of the project must be taken into account in the project design and / or methodology. Unanticipated degradation or damage must be accounted for at revalidation.
2. Continuation of necessary and appropriate activities – necessary maintenance and support activities must be adhered to as prescribed by the project design and / or methodology. Unanticipated curtailment or alteration of appropriate activities must be accounted for at revalidation/ re-verification
3. Appropriate calibration of VRC generation against climatic and other baselines – revalidation of projects must be done in conformance with Modeling Requirements from Annex 6: Impact Cost Estimation Confidence. Recalibration of the climate baseline must be based upon up-to-date climatic modeling using the Representative Climate Pathway (RCP) 4.5 model projections used in the most current IPCC Assessment Report, unless otherwise specified in the methodology or project document.

Commercially Sensitive Information

Indicate whether any commercially sensitive information has been excluded from the public version of the project description and briefly describe the items to which such information pertains.

Information related to the determination of the baseline scenario, demonstration of additionality, and estimation and monitoring of climate vulnerability reduction activities (including operational and capital expenditures) cannot be considered to be commercially sensitive and must be provided in the public versions of the project document.

Further Information

Include any additional relevant legislative, technical, economic, sectoral, social, environmental, geographic, site-specific and/or temporal information that may have a bearing on the eligibility of the project.

15.14 Monitoring Plan

Data and Parameters Available at Validation

Complete the table below for all data and parameters that are determined or available at validation and remain fixed throughout the project crediting period (copy the table as necessary for each data/parameter). Data and parameters monitored during the operation of the project are included in Section 14.2 (Data and Parameters Monitored) below.

Data / Parameter	
Data unit	Indicate the unit of measure
Description	Provide a brief description of the data/parameter
Source of data	Indicate the source(s) of data
Value applied:	Provide the value applied
Justification of choice of data or description of measurement methods and procedures applied	Justify the choice of data source, providing references where applicable. Where values are based on measurement, include a description of the measurement methods and procedures applied (eg, what standards or protocols have been followed), indicate the responsible person/entity that undertook the measurement, the date of the measurement and the measurement results. More detailed information may be provided in an appendix.
Purpose of Data	Indicate one of the following: • Determination of vulnerability baseline scenario • Calculation of baseline vulnerability levels • Calculation of project vulnerability levels • Calculation of vulnerability leakage
Comments	Provide any additional comments

Data and Parameters Monitored During Project

Complete the table below for all data and parameters that will be monitored during the project crediting period (copy the table as necessary for each data/parameter). Data and parameters determined or available at validation are included in Section 12.1 (Data and Parameters Available at Validation) above.

Data / Parameter	
Data unit	Indicate the unit of measure
Description	Provide a brief description of the data/parameter
Source of data	Indicate the source(s) of data
Description of measurement methods and procedures to be applied	Specify the measurement methods and procedures, any standards or protocols to be followed, and the person/entity responsible for the measurement. Include any relevant information regarding the accuracy of the measurements (eg, accuracy associated with meter equipment or laboratory tests).

Frequency of monitoring/ recording	Specify measurement and recording frequency
Value applied:	Provide an estimated value for the data/parameter
Monitoring equipment	Identify equipment used to monitor the data/parameter including type, accuracy class, and serial number of equipment, as appropriate.
QA/QC procedures to be applied	Describe the quality assurance and quality control (QA/QC) procedures to be applied, including the calibration procedures where applicable.
Purpose of data	Indicate one of the following: • Calculation of baseline impact costs • Calculation of project impact costs (without climate change) • Calculation of project impact costs (with climate change) • Calculation of vulnerability leakage
Calculation method	Where relevant, provide the calculation method, including any equations, used to establish the data/parameter.
Comments	Provide any additional comments

Monitoring Plan

Describe the process and schedule for obtaining, recording, compiling and analyzing the monitored data and parameters set out in Section 12.2 (Data and Parameters Monitored) above. Include details on the following:

- The methods for measuring, recording, storing, aggregating, collating and reporting data and parameters. Where relevant, include the procedures for calibrating monitoring equipment.
- The organizational structure, responsibilities and competencies of the personnel that will be carrying out monitoring activities.
- The policies for oversight and accountability of monitoring activities.
- The procedures for internal auditing and QA/QC.
- The procedures for handling non-conformances with the validated monitoring plan.
- Any sampling approaches used, including target precision levels, sample sizes, sample site locations, stratification, frequency of measurement and QA/QC procedures.

Where appropriate, include line diagrams to display the climate vulnerability parameters data collection and management system.

Following guidance for the applicable methodology in Section 12.3, Description of the Monitoring Plan, for preparing the Terms of Reference for recording and reporting monitored project activities to Indigenous community and to VRC project auditor.

15.15 Appendices

APPENDIX X: <title of appendix>

Use appendices for supporting information. Delete this appendix (title and instructions) where no appendix is required.

APPENDIX Y: <title of appendix>

Use appendices for supporting information. Delete this appendix (title and instructions) where no appendix is required.

16 Annex K: Approved Downscaled Modelling Tools and Outputs

World Bank's Climate Portal:

http://sdwebx.worldbank.org/climateportal/index.cfm?page=downscaled_data_download

17 Annex L. References

Convert below to full references:

ILO 169: (art. 6.1.a). [ILO 1989]

UNDRIP 2007 (UN Declaration of Rights of Indigenous Peoples 2007; Articles: 9,18).

(ISO 2009)

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